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ABSTRACT

As a possible solution to the problem of inaccurate perceptions and negative attitudes toward vocational-technical occupations among teachers and pupils, the project investigated the feasibility of training secondary school teachers in a range of disciplines to serve as agents of manpower-economic information dissemination and attitudinal change. Methodology involved in-service seminars and summer institutes for a total of 107 teachers. Regression analysis of the training program data indicated that pupils of the trained teachers experienced greater increases in knowledge and developed more positive attitudes toward nonprofessional work modes than did pupils of teachers not participating in the in-service training. However, analysis did not show that pupils of participant teachers experienced a significantly greater increase in realistic attitudes toward nonprofessional work modes. From these findings, it was concluded that the program objectives had been actualized. Development of a delivery system utilizing multimedia technology, with a software support system, was recommended. A summary of the teacher training units, lists of participants, evaluation variables, and the study instruments are appended. (Author/MF)

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FINAL REPORT

TO THE

DIVISION OF OCCUPATIONAL RESEARCH AND DEVELOPMENT

OF THE

TEXAS EDUCATION AGENCY
UNDER CONTRACT 29538

ON

THE MANPOWER-ECONOMIC EDUCATION PROJECT TO IMPROVE TEACHERS' AND PUPILS' OCCUPATIONAL EMPLOYMENT KNOWLEDGE AND ATTITUDES

by

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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VT-103-286

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December 1973

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ACKNOWLEDGMENTS

Scientific investigations inquiring into aspects of human lives and their feelings are the most difficult to perform. Because the object of investigation is composed of highly sophisticated, independent, and widely diverse individuals, the successful completion of any such study is entirely dependent upon the willing cooperation and assistance of many persons. It is appropriate at this time to take a moment to express our appreciation to a few of these people, without whose help this investigation would have been impossible.

--the young people of the secondary public schools who provided the essential data by participating in pre- and posttesting.

--the teachers, school administrative staffs, and Education Service Center personnel who provided their time and efforts in administering tests and handling data.

--the research assistants and clerical staff who put in many hours sorting, sifting and assimilating data, and the myriad of administrative details involved in production of the report.

We express our sincerest appreciation to Mr. Ray Barber and Mr. Oscar Millican of the Division of Occupational Research and Development of the Texas Education Agency. Without their advice and funding by the T.E.A., this project would not have been possible.

It is our hope that this report will be of benefit to the multitude of teachers and educational administration in their efforts to guide the young people of Texas as they prepare to seek their future in our society.

L.M.A.

W.A.L.

REPORT ABSTRACT

Luker, William A. and Lewis M. Abernathy, "Final Report on the Manpower-Economic Education Project to Improve Teachers' and Pupils' Occupational Employment Knowledge and Attitudes," Manpower and Industrial Relations Institute, Denton, North Texas State University, December, 1973.

This report is submitted as the culminating effort of the Manpower-Economic Education Project to Improve Teachers' and Pupils' Attitudes. It contains a review of the significance and background of the problem, related literature, a discussion of the operational and evaluative methodologies employed, significant findings and conclusions, and specific recommendations.

The project addresses the problem of inaccurate perceptions and negative attitudes toward vocational-technical occupations that are prevalent today among public school teachers and pupils. The project proposes that, as a possible solution, the feasibility of training secondary school teachers throughout a range of disciplines to serve as agents of manpower-economic information dissemination and attitudinal change be tested. The six objectives established for the project are as follows:

1. Make secondary school teachers, throughout a range of disciplines, effective agents of manpower-economic information dissemination and attitudinal change.

2. Increase the understanding of job markets and develop more positive attitudes toward nonprofessional work activities

on the part of secondary school teachers.

3. Develop and validate tests for measuring secondary teachers' and students' attitudinal and cognitive change toward vocational-technical occupations.

4. Develop key representatives and disseminating agents of manpower information in the twenty regional education service centers in Texas.

5. Develop an effective manpower-economics program for in-service use with education service centers.

6. Foster the teaching of manpower-economic education at the secondary level.

Methodologically, the project consists of four phases. Phase I was an experimental pilot program at Lubbock, Texas, to evaluate the content of the instructional program and to validate the test instruments. Phase II consisted of a series of twenty-hour in-service programs conducted one day per week for five weeks at Houston, El Paso, Waco, and Lubbock. Phase III was a six-week, thirty-hours-per-week summer institute conducted at North Texas State University. The first three phases produced a total of 107 trained teachers. Phase IV was an implementation and evaluation effort.

The critical measure of the feasibility of this approach lies in the impact which these teachers had on increasing cognitive understanding and developing more positive attitudes toward nonprofessional work modes among their students. This impact was measured using a stratified selective sample with partial control,

pretest and posttest conditions and subjecting data gathered to multiple linear regression analysis.

Analysis of the data reveals that pupils of trained teachers experience significantly greater increases in knowledge and develop more positive attitudes toward nonprofessional work modes than do pupils of teachers not trained. Analysis indicates that there is no significant difference in performance between pupils of summer institute participants and pupils of in-service participants. Analysis does not show that pupils of participant teachers experience a significantly greater increase in realistic attitudes toward nonprofessional work modes than pupils of nonparticipant teachers. From these findings it is concluded that the objectives of the program have been actualized.

This report recommends that (1) an efficient delivery system utilizing the best available television and multi-media technology and (2) a support (software) system to make the delivery system viable be developed.

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THE MANPOWER-ECONOMIC EDUCATION PROJECT TO IMPROVE TEACHERS' AND PUPILS' OCCUPATIONAL EMPLOYMENT KNOWLEDGE AND ATTITUDES

Statement of the Problem

The purpose of this study is to determine if secondary school teachers, through a range of disciplines, can be made agents of manpower-economic information dissemination and attitudinal change.

Background and Significance of the Problem

The majority of pupils in secondary education are involved in essentially college preparatory programs when only 20 per cent will actually complete a four-year college-or university-degree program. Furthermore, the U. S. Department of Labor estimates that only 20 per cent of the jobs in 1980 will require a college education. Dr. Sidney P. Marland, U. S. Commissioner of Education, in his speech before the National Association of Secondary School Principals in Houston, Texas, on January 23, 1971, indicated his concern for the nation's young people and their opportunity to prepare realistically for today's world of work. He asked, "Shall we persevere in the traditional practices that are obviously not properly equipping fully half or more of our young people, or shall we immediately undertake the reformation of our entire secondary education in order to position it properly for maximum contribution to our individual and national life?"

Howard Rosen, Director of the Office of Manpower Research, Manpower Administration, in an article in the Minnesota Public Service Bulletin states, "We wring our hands about the high unemployment rates of teenagers, knowing full well that regular high schools and vocational schools are not set up to prepare a large percentage of new entrants to the labor force for the world of work"(19). Further, more broad-based research, e.g., Herbert S. Parnes (18) and Jerald G. Bachman (2) in separate studies indicated that public school teachers and their pupils have inaccurate cognitive perceptions of income determinants and of present and future job markets and that they have negative attitudes toward vocational-technical job activities. These inaccurate cognitive perceptions and negative attitudes stand against these facts:

1) In a market system, income and productivity are inextricably related.
2) Changes in the job market "mix" are accelerating at exponential rates.
3) Unskilled jobs are disappearing rapidly.
4) The majority of pupils currently enrolled in public schools will find jobs which are classified as vocational-technical.

The problem is significantly exacerbated by the quantitative limitation of public school counseling programs. In its 1968 General Report, the Advisory Council on Vocational Education said that only about 50 per cent of American high schools provide any form of vocational guidance during a large part of the student's educational career. Research indicates that, in general, programs of public schools do not effectively disseminate accurate data needed to make rational decisions concerning vocational choice. Parnes indicated in his study that

> "Low scores on the test (occupational information) indicate some significant range of occupations that is beyond the ken of the individual. From this viewpoint, the very low scores of the youngest age category (14-17) particularly are discouraging, since they suggest that larger irreversible educational decisions by high school students are being made on the basis of relative ignorance"(18).

Research also indicates that there is a pervasive bias in materials, programs, and attitudes of teachers toward vocational-technical job activities. In order to correct this deficiency in cognition and alter destructive attitudes on the part of teachers and pupils, it would seem that all teachers--not just counselors--should be made disseminating agents of information, vis-a-vis manpower data, and catalytic agents of attitudinal change toward vocational-technical work activities. Thus, the major thrust of this study is to determine if secondary school teachers, throughout a range of disciplines, can be made agents of manpower-economic information dissemination and attitudinal change.

Related Research

T. Adamine and H. G. Heiner conducted a study to develop an experimental forced-choice occupational-preference inventory. The purpose of the inventory was (1) to help the pupils analyze their occupational interests and (2) to gain information for teachers, counselors, and curriculum planners concerning pupils' attitudes toward relatively specific elements of work (1).

Samuel M. Burt studied the relationship between vocational-training programs and economic development in Arkansas. He found that the manpower requirements of industry in Arkansas are being poorly met by the present vocational and technical education system. There are inadequate facilities, and there are not enough students enrolled in trades and industrial fields nor a broad-enough range of programs to meet the variety of requirements from industry, business, and the professions. An estimated 70 per cent of the entry-level job opportunities can be handled by high school graduates with an industrial arts or basic education background. However, of the 36,000 graduates and dropouts, less than 2,000 had received any training from trades and industrial jobs. There is a need for a state plan organized to reflect the manpower needs and the education and training requirements of secondary and post-secondary school levels for each socio-economic area of the state. High school programs providing industrial arts education, work orientation, and basic economic education and cooperative work-study programs should be expanded (3).

Robert E. Campbell consolidated the results of a conference held at Ohio State University in August, 1966, which considered the systems being developed for vocational guidance. The purposes of the conference were, first, to review experiences, problems, and insights developed by the individual participants through research and operational use of new technologies, second, to review the relation of these technologies to vocational education, vocational counseling, and guidance, and, third, to arrange for continued communication among participants as to usefulness of systems analysis and technology in vocational guidance research and practice. Three areas were discussed--projects devoted to the study of careers, projects devoted to the development presentation of material for the enhancement of career decisions but not involving the computer, and projects devoted to the development of material and the presentation and assessment of presentation with the assistance of time-shared computers. Summaries are given for (1) project talent, (2) exploratory study of information-processing procedures and computer-eased technology in vocational counseling, (3) a Harvard-Needs-Newton information system for vocational decisions, (4) a study of intellectual growth and vocational development, (5) the development and evaluation of the pilot computer-assisted vocational-guidance program, (6) clear language printout of demographic and psychometric data regarding college students, (7) a multimedia approach for communicating occupational information to noncollege youth, (8) vocational orientation systems, and five other projects(5).

Virgil Christensen reported on the results of a conference of the Research Training Institute, held in Denver in 1966, which sought to establish priorities for research problems in vocational education for the nation's big cities. Ten studies were proposed to identify the specific problem for vocational education, its purposes, its objectives, the procedures needed to achieve these objectives, and required resources. The proposed studies were as follows: (1) "Design for Career Choice," (2) "Early Identification and Selection Procedures to Assure a Greater Degree of Success in Secondary Vocational Programs," (3) "Using Occupational Tasks as a Vehicle for Facilitating Basic Education and Occupational Learning," (4) "The Problem of Finding Properly Supervised Work-Experience Situations for Students not Prepared for O.V.T. Programs," (5) "Motivation of Students in Developing Attitudes Toward Vocational Goals," (6) "The Relationship of Image to Choice of a Vocational Program, Performance in that Program, and Performance in the Field," (7) "A Survey to Determine the Attitudes of Select Groups in Regards to Vocational-Technical Education," (8) "Identification and Location of Low-Status Attitudes Affecting Decision Making in Vocational Education," (9) "Development of Realistic Understanding Within the Community Concerning Vocational Education," and (10) "Outline of Preservice Training"(6).

Joe R. Clary and Bert N. Westbrook reported on the initial phase of a project to construct and validate an instrument which could measure vocational maturity. Their initial report deals with the organization, rationale, methods, and expected end products of what will be a three-year project at the University of North Carolina. The total project assumes that the individual and society as a whole suffer from unwise educational and vocational choices, that these choices are related to vocational maturity, and that a need exists for better methods of measuring vocational maturity. The project staff will administer, to representative samples of southern public school pupils in grades 8-12, three tests--the tryout form of the VMM, the preliminary form, and the final form. After all the data are analyzed, a final report will give an account of the project and will include the VMM. It is expected that the VMM will aid in (1) evaluating educational programs which include vocational exploration as a major component, (2) increasing understanding of the construction of vocational maturity, (3) identifying pupils who need special assistance in vocational development, and (4) evaluating programs designed to provide students with vocational-exploratory experiences(7).

Wayne E. Courtney's study for the Wisconsin State Board of Vocational, Technical, and Adult Education focused on the identification of a starting point for research efforts in the state's vocational-and technical-education system. The directors of the sixty-four schools offering vocational and technical programs in the state ranked the components, according to research importance, in fourteen categories relating to the broad areas of occupational opportunities, human resources, and educational resources. Although, in general, agreement was low, the following components received a plurality of first-place rankings of research importance--(1) occupations for which vocational-and technical-education programs should be available, (2) competencies needed for successful entry, persistance, and advancement, (3) factors affecting motivation of the socioeconomically handicapped to pursue training for gainful employment and to seek employment, (4) improvement of community attitudes toward vocational education as preparation for employment, (5) factors affecting decisions to move and seek employment in new situations, (6) assistance for students to enable them to cope effectively with career changes throughout life, (7) identification of persons who can benefit from vocational education and types of training that would be most beneficial, (8) basic skills which are transferable from one occupation to another or which function in clusters, (9) curriculum for new and emerging occupational fields, (10) optimum mix of theory and practice, (11) sources of personnel appropriate to specific staffing needs, (12) effective methods of organizing, administering, and supervising programs of vocational education, (13) effective vocational guidance and counseling procedures, and (14) facilities and equipment necessary to prepare persons to enter and advance in various occupations. The instrument used is included in the study (8).

Robert J. Heger focused his study of vocational programs in Idaho secondary schools on the decision-making process of superintendents, as related to the system theory of administrative change. Specific objectives were as follows: (1) to analyze superintendents' decisions related to modifying and initiating vocational-education programs in Idaho, (2) to test a theory of administrative change as related to vocational education, and (3) to determine conditions in which vocational education change is least and most likely to occur. Interviews were conducted with fifty school superintendents randomly selected from school districts located in the six junior college districts of Idaho to test four propositions to predict conditions tending to inhibit change and three tending to aid change. Relationships among properties and propositions of the open system theory of administrative change indicated that (1) steady states of systems are accompanied by increased hierarchy, (2) progressive departmentalization seems to accompany the interplay of subsystems in such a way as to induce change, (3) districts encouraging dynamic interplay are more likely to employ outside superintendents and support his efforts for change, and (4) schools with internal feedback systems are more likely to respond to than resist strong outside pressures. A conclusion in direct opposition to the theory predictions stated that the more hierarchial the structure of an organization and the more functional the dynamic interplay between subsystems, the greater the probability of vocational program change. A bibliography and statistical data are included.

In an article, William Loomis provided considerable information relating to many of the problems facing career education. He cites grants that have been used to further training of vocational educators as well as state funded projects. Within this educational overhaul is included an articulated program of career development from elementary schools through postsecondary education that will allow students to prepare for the occupational fields of their choice. The article contains a description of the "cluster" approach which has proven to be particularly successful in the education of disadvantaged students.

Kenneth M. Loudermilk and Gerald Diminico presented a study wherein the development and use of instruments for vocational guidance, selection and placement within the state of Idaho is reviewed, vocational guidance is defined as assisting the individual to understand himself, the world of work, and career choice. Selection and placement are described as activities characteristically used by educational institutions and business organizations in deciding who will be accepted and what roles and treatments would be expected of those who are accepted. Specific attention is given to research in which the general aptitude test battery (GATB) was used to predict success in vocational training or work performance. Separate chapters are devoted to research studies with appraisal instruments completed in Idaho as well as to thirty-one studies done elsewhere in the nation. Because more than three-fourths of the studies were completed as individual graduate research papers or theses, research results were generally not comparable or cumulative from one study to another. An extensive bibliography is included. An earlier study "A Survey of Literature Related to Selected Non-professional Occupations" is available(13).

In its final report in 1970, the Massachusetts Vocational Education Research Coordinating Unit reviewed its major activities, covering the period from April 1967 through October 1969. During the first year (April 1967-June 1968), the RCU concentrated on establishing an information system and announcing its existence.

One-third of the staff time was devoted to helping the Schaffer-Kaufman study. Research projects the second year (August 1968-October 1969) focused on (1) disadvantaged youth in urban vocational school settings, (2) development of a system for a statewide evaluation of vocational-technical education, (3) Massachusetts Information Feedback System for Vocational Education, (4) evaluation of vocational-technical education, and (5) a program for girls in vocational-technical education, and (6) attitudes of junior high school staff members toward vocational education in the high school. Conclusions and recommendations are included(14).

William E. Mauberry's study focused on the effects of perceived teacher attitudes in relation to students' achievement. His study suggests that the attitude exhibited by the teacher toward the material he is teaching exerts more influence on student achievement, as it is typically measured, than his attitudes towards students as individuals(15).

Anne Mayhew found in a study of "Education, Occupation and Earnings" that the high degree of association between level of educational attainment and earnings is attributable in large part to differences in earnings with occupations. Despite the stress often put on the idea that more education opens the doors to better-paying jobs, for most men who do not go to college less than half (frequently much less than half) of the advantage in earnings associated with additional years of schooling derives from entry into higher-paying occupations. While entry into many jobs in the professional and managerial categories requires college education, for a large part of the population, occupational distribution must be taken as largely independent of variation in years of schooling. Even for those who complete high school, half or more of their earnings advantage is owing to higher earnings within occupations which apparently were open to those who did not complete high school. To the extent that staying in school pays off, it does so largely because high school graduates earn more in the occupations they enter than would have been possible had they not remained in school(16).

Herbert Parnes, working under a research contract for the U. S. Department of Labor, concluded a longitudinal study of the educational and labor market experience of male youth in 1970. The study involved a national sample of 5,000 males between the ages of fourteen and twenty-four. Sixty per cent wanted to obtain at least four years of college, while 70 per cent desired at least two years of college. Twenty-five per cent had not decided on a work career, but 50 per cent indicated that they wanted to be in professional or technical occupations by age thirty. Given the occupational distribution of job opportunities, it is virtually certain that many of these youth will not realize their aspirations. There was a direct relationship between youth pay increases and scores on the occupational information test. The study argues for a much greater effort to acquaint students with the dimensions of the world of work (18).

Program Objectives

A. To make secondary school teachers, throughout a range of disciplines, effective agents of manpower-economic information dissemination and attitudinal change.

B. To increase the understanding of job markets and develop more positive attitudes toward nonprofessional work activities on the part of secondary school students.

C. To develop and validate tests for measuring secondary teachers' and students' attitudinal and cognitive change toward vocational-technical occupations.

D. To develop key representatives and disseminating agents of manpower information within the twenty regional education service centers in Texas.

E. To develop an effective manpower-economics program for in-service use with educational service centers.

F. To foster the teaching of manpower-economic education at the secondary level.

Methodology

A. Procedures and Activities:

The project was conducted in four phases:

Phase I--November-December, 1971--was an experimental twenty-hour manpower-economic education in-service seminar in Lubbock, Texas. The purpose of this seminar, conducted by L. M. Abernathy (see Appendix A for complete vitae), was to establish the suitability of program content and materials and to validate the assessment instruments. The basic cognitive and conative structure was provided by the Robert L. Darcy and Phillip E. Powell texts and teachers manual(9). The general topics covered were world of economics, nature of work, rational decision making and career planning, technology and change, manpower markets, occupational opportunities, and manpower skills. (A detailed discussion appears in Appendix C.) A wide range of pedagogical devices were employed including lectures, group interactions, individual consultations, sociodramas, and microteaching. The participants were full-time secondary (7-12) teachers in the Lubbock Education Service Center Region. A stratified random sample of eighteen teachers was taken from a population frame which included all the secondary teachers in the region. Stratification was based upon school size, socioeconomic class of the pupils, and the rural-urban mix of the region. The program director of the Lubbock Education Service Center provided administrative coordination of this phase. The seminar was conducted on five consecutive Wednesdays from 3:00 p.m. to 5:00 p.m. and from 6:00 p.m. to 8:00 p.m.

Phase II--January-May, 1972--was, with major cognitive, methodological, and assessment alterations, a replicate of Phase I. A series of four in-service programs, also conducted by L. M. Abernathy, was held in Lubbock, El Paso, Houston, and Waco, Texas. The purpose of these seminars was to transform teachers, from a range of diverse disciplinary backgrounds, into active agents of cognitive dissemination and attitudinal change in the area of world-of-work economic education. The basic cognitive and conative materials and methods were the same as those used in Phase I. The participants, none of whom was involved in Phase I, were full-time secondary teachers (7-12) in the Lubbock, El Paso, Houston, and Waco Education Service Center Regions representing regional, stratified random samples of nineteen, nine, twenty-nine, and twelve respectively. The stratification criteria were the same as those employed in Phase I. The seminars were conducted one day per week from 3:00 to 5:00 p.m. and from 6:00 to 8:00 p.m. for five consecutive weeks. (A complete roster of in-service participants is provided in Appendix D.)

Phase III--June-July, 1972--was a six-week summer institute for twenty teachers from eighteen of the twenty education service centers. The purpose of the summer institute was to test the relative cost effectiveness of the summer institute (expensive) versus in-service programs (inexpensive) in terms of changed pupil behavior. The cognitive, conative, and methodological structure of the summer institute was identical to the in-service seminars conducted in Phase II. The programmatic involvement of the summer institute participants was obviously much higher. (180 contact hours in summer institute vs. 20 contact hours in the in-service program). The summer institute ran five days a week, six hours per day for six weeks, for a total of 180 hours of instruction. Each participant was selected for his/her leadership potential and capacity to function as a teacher-trainer. Each participant was provided basic manpower-economic education literacy, and during the course of the institute each developed complete lesson plans for use in an appropriate classroom situation. (A complete roster of summer institute participants is also included in Appendix D.)

Phase IV--September-May, 1972-1973--was a year-long implementation and evaluation phase the purpose of which was to assess the impact of the Phase II and Phase III programs against a success criterion of changed cognitive and conative pupil behavior. Phase IV, conducted by L. M. Abernathy and William A. Luker (see Appendix B for complete vitae), involved the implementation of the program in the classroom by selected participants from the in-service (Phase II) and the summer institute (Phase III) programs. The primary purpose of this culminating phase was to measure the impact of the program on the pupils of participant teachers. The directors of the project conducted follow-up visitation seminars to motivate and encourage the participant teachers.

One hundred and seven trained teachers were available from eighteen education service-center regions. A random sample of twelve teachers was selected from the population of trained teachers from the following independent school districts: El Paso, Ysleta, Ector County, Houston, Spring Branch, La Marque, Waco, McAllen, Arlington and Daingerfield.

B. Evaluative Methodology

As indicated in Part A, "Procedures," the program consisted of four phases: Phase I, Lubbock Experimental seminar (content, methodological, and assessment instrument testing); Phase II, in-service seminars for teachers (Lubbock, El Paso, Waco, Houston Education Service Centers); Phase III, summer institute; and Phase IV, implementation and assessment.

The critical evaluation of the entire project was centered in Phase IV. The evaluation involved the testing of four hypotheses:

1. A training program (either a summer institute

or an in-service seminar in World of Work Economic Education WOWEE) will produce significant increases in the cognition of pupils of teachers enrolled in a WOWEE program. That is, pupils of teachers trained in WOWEE programs will have significantly better understanding of the world of work than pupils of teachers not trained in a WOWEE program.

2. A training program (either a summer institute or an in-service seminar) in WOWEE will produce significant attitudinal changes toward the world of work in pupils of teachers enrolled in the program. That is, pupils of teachers trained in WOWEE programs will have more positive attitudes toward nonprofessional work modes than pupils of teachers not trained in a WOWEE program.
3. A training program (either a summer institute or an in-service seminar) in WOWEE will produce a significant increase in the realism of pupil occupational goals.
4. There will be no significantly different measurable impact between students of teachers trained in the twenty-hour in-service seminars and students of teachers trained in the summer-institute program.

To test these hypotheses, the following methodology was employed:

The Research Design.--The research design, a nonequivalent control-group design, is schematically outlined as follows:

Experimental	E_1	O_1	X	O_2
	E_2	O	X	O
	E_3	O	X	O
	E_4	O	X	O
	E_5	O	X	O
	E_6	O	X	O
	E_7	O	X	O
	E_8	O	X	O
	E_9	O	X	O
	E_{10}	O	X	O
	E_{11}	O	X	O
	E_{12}	O	X	O

Control	C_1	O_3	O_4
	C_2	O	O
	C_3	O	O
	C_4	O	O
	C_5	O	O
	C_6	O	O
	C_7	O	O
	C_8	O	O
	C_9	O	O

The Population.--The population included all of the 107 teachers trained in the in-service and summer-institute programs. (See Appendix D.)

The Sample.--From the population of 107 teachers, a stratified sample of twelve was taken. The stratification criteria were a) summer-institute participants, b) in-service participants, c) geographic area, d) grade level, and e) subject-matter area. (Appendix E is a complete roster of the experimental/control teachers.) For each of the experimental teachers, a control teacher who had not participated in any kind of career education program was selected judgmentally to match the characteristics of the experimental teachers. Since three experimental teachers could not be matched, this produced a control group of only nine teachers. The matching criteria were grade level, subject-matter area, pupil socioeconomic class, and geographic region. One class of pupils for each teacher was selected randomly for measurement. The total sample size was n = 636.

The Variables.--The variables used are described in detail in Appendix F.

The Instruments.--The instruments are outlined as follows:

Name	Variable Measure	The Source
Student-Data Questionnaire	X_{8-11}, X_{17-21a}	Researcher-Developed Instrument
Hollingshead Two-Factor Index of Social Position	X_{12}, X_{13}, X_{14}, X_{15}, X_{16}	(11)
Test of Understanding in WOWEE	X_2, X_3, X_4	Researcher-Developed Instrument
"Were I a Worker...."	X_5, X_6, X_7	(20)
Teacher Questionnaire	X_1, X_{22-30}, X_{33}, X_{35}, X_{36}, X_{37}	(17)
Teacher Attitudinal Survey	X_{31}	(17)

These instruments (see Appendix G.) were selected as a result of careful analysis of the Phase I data (Teacher and Pupil Performance). The validation of the instruments was based upon the assumption that, if the cognitive and conative instruments were valid measures, the instruction in WOWEE should affect the test scores. This assumption was verified in Phase I.

Detailed Description of Data Collection--At the conclusion of each in-service seminar and summer institute, the participant teachers were cognitively and conatively posttested. Data concerning the conative insight of the control teachers were collected at the beginning of the fall semester, 1972.

At the beginning of the fall semester, 1972, one class of each of the experimental and control teachers was cognitively and conatively pretested. Each of the experimental teachers was instructed to begin utilization of pedagogical skills and cognitive insight acquired as a result of participation in the WOWEE summer institute or in-service programs. The control teachers were given no instructions. At the end of the spring semester, 1973, many of the same pupils were cognitively and conatively posttested.

Analytical Methodology--A multiple regression was the basic analytical device employed. The model was $Y_c = a + b_1x_1 + b_2x_2 + ...b_nx_n + E$. The critical statistic in the analysis was the partial absolute Beta coefficient of the experimental variable. The problem of missing data points in control variables was handled by substituting the mean of the series and creating a dummy variable which accounted for variation attributable to missing data.

ANALYSIS OF DATA

The first hypothesis to be tested was that a training program (either a summer institute or an in-service seminar in world-of-work economic education) will produce significant increases in the cognition of pupils of teachers enrolled in a WOWEE program. That is, pupils of teachers trained in WOWEE programs will have significantly better understanding of the world of work than pupils of teachers not trained in a WOWEE program.

With posttest pupil understanding of WOWEE (cognition) as the dependent variable (X_2), the multiple-regression analysis generated the data shown in Table 1 below.

TABLE 1

Regression Coefficients on Pupil Cognition
of WOWEE Information

Degrees of Freedom - 635 n = 636

Variable	Description	Partial Beta	F	P
x_1	Experimental-Control	1.88420960	9.3461	0.0023
x_3	Cognitive Pretest	0.36153926	58.3035	0.0000
x_4	Companion Variable	-0.90362975	0.2082	0.6484
x_5	Conative Posttest	-0.00249666	1.2371	0.2661
x_6	Conative Pretest	0.00021959	0.0054	0.9413
x_7	Companion Variable	1.91971427	0.9656	0.3261
x_8	Grade Level	-1.94378135	0.5976	0.4398
x_9	Pupil Age	-0.23607697	2.0246	0.1552
x_{10}	Companion Variable	-0.87372828	1.1305	0.2876
x_{11}	Pupil Sex	-0.15371038	0.4680	0.4942

Table 1 (continued)

Variable	Description	Partial Beta	F	P
X_{12}	Parental Educational Level	0.04721892	0.6505	0.4203
X_{13}	Companion Variable	0.51179290	3.2223	0.0731
X_{14}	Parental Occupation	0.00925459	0.1279	0.7207
X_{15}	Companion Variable	0.26467149	0.3094	0.5782
X_{16}	Socioeconomic Index	-0.00223975	1.6079	0.2051
X_{17}	Anglo	-2.15678451	12.1820	0.0005
X_{18}	Black	-0.34612030	0.5299	0.4670
X_{19}	Pupil Work Experience	0.31155127	1.3714	0.2417
X_{20}	Pupil Scholastic Aptitude	0.07721629	14.3365	0.0002
X_{21}	Companion Variable	-0.22908730	0.2869	0.5924
X_{22}	El Paso I.S.D.	-4.16518621	0.3155	0.5747
X_{23}	Ysleta I.S.D.	-1.60877899	1.2517	0.2633
X_{24}	Ector County I.S.D.	2.39786541	2.7174	0.0998
X_{25}	Waco I.S.D.	-6.24748063	0.3886	0.5333
X_{26}	Houston I.S.D.	-6.64242581	3.9128	0.0484
X_{27}	Spring Branch I.S.D.	-1.48758741	0.0883	0.7664
X_{28}	La Marque I.S.D.	-0.28082610	0.0747	0.7848
X_{29}	McAllen I.S.D.	-5.28327354	1.7018	0.1923
X_{30}	Arlington I.S.D.	-7.04789480	2.8189	0.0936
X_{31}	Teacher Attitude Toward Non-Professional Work Modes	0.03456125	2.1804	0.1403

Table 1 (continued)

Variable	Description	Partial Beta	F	P
X_{32}	Summer Institute--In-service Program	-0.14703564	0.0964	0.7563
X_{33}	Teacher Sex	-1.70961853	0.2077	0.6488
X_{34}	Experimental with/without Control	-0.97176007	3.1619	0.0759
X_{35}	School Voc-Ed Program	-0.77345596	0.4602	0.4979
X_{36}	Teacher Age	-0.01184718	0.2835	0.5947
X_{37}	Teacher Educational Level	-1.54420717	10.4553	0.0013

The variable critical to the test of the Hypothesis I, X_1, Experimental Control, was significant at the .01 level (P = .0023). This means that, everything else being equal, pupils taught by teachers participating in the program's seminars and institutes increased their understanding of WOWEE more than pupils of teachers not participating. And this difference holds constant despite any variations between experimental and control group attitudes and socioeconomic class, scholastic aptitudes, teacher attitudes, pretest differences and so on.

The second hypothesis to be tested was that a training program in WOWEE will produce significant attitudinal changes toward the world of work in pupils of teachers enrolled in the program. That is, pupils of teachers trained in WOWEE programs will have more positive attitudes toward nonprofessional work modes than pupils of teachers not trained in a WOWEE program. The data needed to test this hypothesis are in Table 2 below.

TABLE 2

Regression Coefficients on Pupils' Attitudes Toward Nonprofessional Work Modes

Degrees of Freedom: 635 n = 636

Variable	Description	Partial Beta	F	P
X_1	Experimental-Control	19.09369960	2.8717	0.0906
X_2	Cognitive Posttest	-0.82552212	1.2371	0.2661
X_3	Cognitive Pretest	-0.11791547	0.0171	0.8960
X_4	Companion Variable	-29.70848521	0.6810	0.4095
X_6	Conative Pretest	0.67034226	205.5985	0.0000
X_7	Companion Variable	37.44643424	1.1114	0.2917
X_8	Grade Level	82.67356135	3.2840	0.0704
X_9	Pupil Age	-1.10682613	0.1342	0.7143
X_{10}	Companion Variable	-29.98195027	4.0456	0.0447
X_{11}	Pupil Sex	-14.20359132	12.3255	0.0005
X_{12}	Parental Educational Level	1.59185763	2.2419	0.1348
X_{13}	Companion Variable	8.65534588	2.7852	0.0956
X_{14}	Parental Occupation	0.17859914	0.1441	0.7044
X_{15}	Companion Variable	16.81313279	3.7979	0.0518
X_{16}	Socioeconomic Index	-0.02310662	0.5166	0.4727
X_{17}	Anglo	-11.87153124	1.0960	0.2951
X_{18}	Black	-15.36800044	3.1730	0.0753

Table 2 (continued)

Variable	Description	Partial Beta	F	P
X_{19}	Pupil Work Experience	-4.17095614	0.7426	0.3891
X_{20}	Pupil Scholastic Aptitude	-0.16629158	0.1965	0.6578
X_{21}	Companion Variable	-16.27718791	4.4107	0.0361
X_{21a}	Interaction	1.04909483	4.5602	0.1494
X_{22}	El Paso I.S.D.	241.08059475	3.2118	0.0736
X_{23}	Ysleta I.S.D.	41.80359206	2.5616	0.1100
X_{24}	Ector County I.S.D.	-46.48741874	3.0908	0.0722
X_{25}	Waco I.S.D.	337.78542713	3.4535	0.0636
X_{26}	Houston I.S.D.	105.82785613	2.9992	0.0838
X_{27}	Spring Branch I.S.D.	-137.20342546	2.2809	0.1315
X_{28}	La Marque I.S.D.	26.03109828	1.9473	0.1634
X_{29}	McAllen I.S.D.	151.76841631	4.2653	0.0393
X_{30}	Arlington I.S.D.	137.87577670	3.2650	0.0713
X_{31}	Teacher Attitude Toward Nonprofessional Work Modes	-0.57206098	1.8055	0.1795
X_{32}	Summer Institute - In-Service Program	10.07406878	1.3722	0.2415
X_{33}	Teacher Sex	120.48529071	3.1345	0.0771
X_{34}	Experimental with/without Control	-7.81244391	0.6154	0.4332
X_{35}	School Voc.-Ed. Program	-34.73300783	2.8176	0.0937
X_{36}	Teacher Age	0.20669566	0.2609	0.6097

Table 2 (continued)

Variable	Description	Partial Beta	F	P
X_{37}	Teacher Educational Level	7.80848165	0.7957	0.3728

The variable critical to the testing of Hypothesis II, X_1, Experimental Control, was significant at the .1 level (P = .0906). This means that pupils taught by teachers participating in the seminars and summer institutes have significantly "better" attitudes toward nonprofessional work modes than pupils of teachers not participating in the program.

The third hypothesis was that a WOWEE training program will produce significant increases in the realism of pupils' occupational goals. The data requisite to test this hypothesis are in Table 2.

The variable critical to the test of this hypothesis is X_{21a}, the scholastic-aptitude scores interacted with the experimental control variable. No relationship was found between scholastic-aptitude scores interacted with the experimental variable and pupil attitude toward nonprofessional work modes. This means that pupils taught by WOWEE program teachers were not significantly different in the realism of their attitudes toward nonprofessional work modes from pupils of teachers not participating in the program.

The fourth hypothesis was that there would be no significant difference between the measurable impact on students of teachers trained in the in-service seminars and students of teachers trained in the summer-institute program. The data needed to test this hypothesis are found in Tables 1 and 2.

The variable critical to this hypothesis is X_{32}, which measured teacher participation in either the summer institute or the in-service program. This variable was not significantly related to cognitive performance or attitudinal change (cognitive $P = .7563$ and conative $P = .2415$). This means that there was no relationship between cognitive and conative pupil performance and the training locus of the teachers.

Several significant, nonhypothesized relationships emerged: Mexican-Americans increased their cognitive understanding and had more positive attitudes toward nonprofessional work modes than Anglos and Blacks. (See Table 1, variables X_{17} and X_{18}, $P = .0005$ and Table 2, variables X_{17} and X_{18}, $P = .0704$ respectively.) Pupils with higher scholastic aptitudes had a greater increase in cognitive understanding. (See Table 1, variable X_{20}, $P = .0002$.) Pupils of experimental teachers who had no control teacher had a greater increase in cognition. (See Table 1, variable X_{34}, $P = .0759$.) Pupils of masters' degree teachers did less well on the test of WOWEE understanding than pupils of teachers with bachelors' degrees. (See Table 1, variable X_{37}, $P = .0013$.) Pupils from higher grade levels had more positive attitudes toward nonprofessional work modes than pupils from lower grade levels.

(See Table 2, variable X_8, P = .0704.) Females had more positive attitudes toward nonprofessional work modes than males. (See Table 2, variable X_{11}, P = .0005.) Pupils of male teachers had more positive attitudes toward nonprofessional work modes than pupils of female teachers. (See Table 2, variable X_{33}, P = .0771.) Pupils attending schools that have a vocational-technical work program had more positive attitudes toward nonprofessional work modes. (See Table 2, variable X_{35}, P = .0937.)

Findings

A. Pupils of teachers participating in WOWEE seminars or a summer institute experienced significantly greater increases in knowledge or understanding of the world of work than pupils of teachers who had not participated in the WOWEE program.

B. Pupils of teachers participating in WOWEE in-service programs or a summer institute experienced significantly greater increases in positive attitudes toward nonprofessional work modes than pupils of teachers not participating in WOWEE programs.

C. Pupils of teachers participating in WOWEE seminars or a summer institute did not experience significantly greater increases in realistic attitudes toward nonprofessional work modes than pupils of teachers not participating in the WOWEE program.

D. There were no significant differences between the cognitive and conative performances of pupils taught by summer institute participants and pupils taught by in-service participants.

Relationship of the Findings to the Objectives of the Project

These findings suggest that the objectives of the program (see page 13) have been actualized in the following ways:

A. First, the data show that secondary teachers, through a range of disciplines, can be transformed into effective agents of WOWEE information dissemination and attitudinal change, and the task can be accomplished by utilizing relatively short (20 hour), inexpensive training programs;

B. Second, the data suggest that test instruments measuring attitudinal and cognitive changes can be developed and utilized in evaluating these programs and that these evaluations can be extended to the critical arena of measured changes in pupil behavior;

C. Third, the data show that a measurably effective program in world of work can be developed and implemented using, as its basic cognitive structure, the discipline of economics;

D. And fourth, the data clearly portray the fact that a multiplier cadre of disseminating agents, within the education service-center regions, can be developed.

Recommendations

During the last five years, career education has become the focus of curricular reformers. The didactically obvious notion that formal educational processes should play a vital role in the development of an understanding of the economic process and the role that work plays in the lives of men and women has, at last, transcended the narrower visions of academic and vocational educational traditionalists. That is, this "new" vision of career education, embracing the twin goals of manpower understanding and manpower development, is committed to a pervasive, developmental, and integrative curricular reconstruction which includes such cognitive and conative concepts as the fundamental realities of exponential institutional change, the problems and opportunities presented by institutional dynamism, and the increasing importance of human resources within the framework of this change matrix. But any program designed to produce organic curricular reconstruction, manifested in measurable changes in pupil understanding and attitudes, must produce changes in what teachers and pupils do. And producing changes in what teachers and pupils do demands a program with two critical characteristices:

A. The program must have a delivery system which is effective and efficient.

    1. To be effective the delivery system must be

        a. Cognitive--It must deliver the essential structural elements of the discipline(s).

        b. Conative--It must change the attitudes of teachers and pupils so that the discipline is relevant and translatable into languages comprehensible to appropriate constituencies.

c. Methodological--It must give teachers authentic capacities to translate the basic structure into curricular experiences which are comprehensible to all pupil constituencies.

d. Integrative--It must integrate the discipline with other disciplines. Career education cannot be achieved with one or two courses restricted to the level of the senior high school.

2. To be efficient the delivery system must be characterized by diminishing marginal cost per teacher and pupil.

B. To make any delivery system viable, a support (software) system must be brought to bear which can provide the environmental conditions which, in turn will allow the system to come "on-line." Any delivery system must be supported by the following kinds of activities:

1. Selling--The program must literally be "sold" to all relevant constituencies, including administrators, teachers, parents, pupils, school board members, and the general public.

2. Institutionalizing--Without institutionalizing, individual participation will be discouraged, crushed, ostracized, and/or eliminated. No program can be successful unless it is a part of the institutional goal/reward system and unless it creates conditions under which some person(s) are responsible and rewarded for achieving the program's goals.

3. Reinforcing--Successful programs must reinforce and follow-up with hot lines, trouble-shooting seminars, and so on. Teachers and administrators need to be positively reinforced and supported. Without reinforcement and follow-up, even when goals have been institutionalized, nothing happens.

4. Evaluation--Successful programs must be constantly monitored, tested, and evaluated in terms of the measurable impact they are having on teachers and pupils.

This project has shown clearly that an effective delivery system can be developed. The two major tasks still remaining are the development of 1) an efficient delivery system(s) utilizing the best available television and multi-media technology and 2) a support/software system which will provide the "human" foundation discussed above. These two major tasks still lie ahead.

APPENDIX A

VITAE (Lewis M. Abernathy)

APPENDIX A

VITAE

LEWIS M. ABERNATHY, Associate Professor of Economics, Director, Manpower & Industrial Relations Institute, North Texas State University

DEGREES:
- B.B.A., University of Mississippi, 1954
- M.B.A., University of Mississippi, 1959
- Ph.D., University of Oklahoma, 1967

RECENT RESEARCH:
- Economic Implications of Dallas-Fort Worth Regional Airport (1968-1969)
- Labor Force Commuting Patterns: Analysis of Economic and Social Characteristics (Southwestern Social Science Association, April, 1968)
- Commuting Time Patterns and Labor Market Delineation (Spring, 1968)
- Federal Grant: Employment Analysis for Local Government Officials (1968-69)
- Texas Education Agency Grants:
- Manpower Education in the Public Schools (1969-71)
- In-Service Training Model for Manpower-Career Education (1971-73)
- Work Mode Bias in Public School Instructional Materials (1972-)
- Statewide Delivery System for Career Education (1973-)

PROFESSIONAL AND UNIVERSITY POSITIONS:
- Member, Editorial Board, North Texas Business Studies (1965-1970);
- Member, Board of Directors of Technical Information and Management Services Program (1965-1969);
- Secretary-Treasurer, North Texas Chapter, Texas Association of College Teachers (1965-1966);
- Vice-President, North Texas Chapter, Texas Association of College Teachers (1969-1970);
- Graduate Advisor in Economics (since 1967);
- Charter Member, Faculty Senate (NTSU) (1969-1972);
- Chairman, Faculty Salary Study Committee (1970-1971);
- Member, Executive Committee, Department of Economics (1969-)

CONSULTANT ACTIVITIES:

North Central Texas Council of Governments, *Regional Airport Environs Study*
Freese, Nichols, and Endress--Consulting Engineers, *Economic Base Studies*
Environmental Research Associates, Inc., *Economic and Demographic Analysis of Cities*
Decisions for Denton, *Economic Growth Study*
Texas Education Agency, Independent School Districts, and Educational Service Centers, *Manpower, Economic, and Career Education in Public Schools*.
National Instructional Television Center, *National Career Education Project*.

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

American Economic Association
Regional Science Association
Southeastern Regional Science Association
Southwestern Social Science Association
Rocky Mountain Social Science Association
Industrial Relations Research Association
Texas Association of College Teachers
American Vocational Education Research Association

APPENDIX B

VITAE (WILLIAM A. LUKER)

APPENDIX B

VITAE

Name	William Allen Luker
Date of Birth	October 17, 1930
Marital Status	Married, Geneva Jo Luker nee Wimberley; one child, William Allen, Jr.
Present Position	Professor of Economics and Director of the Center for Economic Education, North Texas State University, Denton, Texas
Education	Public Schools: Fort Worth, Texas B.B.A.: Economics, Texas A & M University, 1952 M.Ed.: School Administration and History, North Texas State University, 1957 Ed.D.: Economic Education, North Texas State University, 1963
Professional Associations	Phi Delta Kappa Delta Sigma Pi Omicron Delta Epsilon Southwest Social Science Association Southern Economics Association Rocky Mountain Social Science Association American Economics Association Texas State Teachers Association Association for Evolutionary Economics Texas Council for the Social Studies National Council for the Social Studies Western Regional Science Association American Academy of Political and Social Science American Vocational Education Research Association Community College Social Science Association
Professional Experience	1952-1955 U.S. Army, 1st Lt., Armor 1955-1957 Lecturer (Quantitative Methods) School of Business Administration, North Texas State University, Denton, Texas 1957 Estimating, Forecasting, Cost Control Analyst, Chance-Vought Aircraft, Dallas, Texas 1957-1961 Instructor (Statistics and Quantitative Methods), School of Business Administration, North Texas State University, Denton, Texas

Professional Experience (continued)	1961-1963	Associate Registrar, North Texas State University, Denton, Texas
	1963-1965	Assistant Professor (Statistics and Research Methodology), Texas A & M University, College Station, Texas
	1965-1968	Associate Professor and Head, Department of Business Analysis and Research, Texas A & M University, College Station, Texas
	1968-1969	Associate Professor of Economics and Director of the Center for Economic Education, North Texas State University, Denton, Texas
	1969 to present	Professor of Economics and Director of the Center for Economic Education, North Texas State University, Denton, Texas

Recent Papers Presented at Professional Meetings

* "The Relationship Between Knowledge of Economics and Certain Elements of the Affective Domain," Rocky Mountain Social Science Association, Spring, 1970, Fort Collins, Colorado.

* "The Relationship Between Economic Knowledge, Liberalism-Conservatism, and Other Affective Dimensions," Community College Social Science Association, Fall, 1971, San Francisco, California.

* "Values in Economics," Western Regional Science Association, Spring, 1972, San Diego, California.

* "The Level of Economic Literacy Among Texas Public School Social Science Teachers," Southwestern Economics Association, Spring, 1973, Dallas, Texas.

** "A Textbook Analysis of the Treatment of Work in Elementary Readers," American Educational Research Association, Spring, 1973, New Orleans, Louisiana.

** "Social Science and Survival", National Science Teachers Association, Spring, 1973, Detroit, Michigan.

* Regional Meetings

** National Meetings

Selected Publications

"A Study Designed to Develop Guidelines for the Identification of Potentially Fast Growing Sub-State Geographic Areas," Business Studies, North Texas State University, Denton, Texas, Fall, 1967, pp. 129-137.

"Social Education and the Problem of Value," Community College Social Science Quarterly, Winter, 1971, Grossmont, California, pp. 23-27.

"Economics in English," Southwestern Journal of Social Education, Winter, 1972, Denton, Texas, pp. 5-15.

"The Relationship Between Economic Knowledge and Certain Elements of the Affective Domain," Research Papers in Economic Education, A. Welsh, Editor, Joint Council on Economic Education, New York, 1972, pp. 12-23.

Elementary Basal Readers and Work Mode Bias, Monograph, Texas Education Agency, Austin, Texas, 1973, 86 pages.

Consulting:

Curriculum Development; Staff Development; Multi-Media Systems Development; and Program Assessment

Peso Education Service Center (Region XVI, Amarillo)
Lubbock Education Service Center (Region XVII)
Waco Education Service Center (Region XII)
El Paso Education Service Center (Region XIX)
Fort Worth Education Service Center (Region XI)
San Angelo Education Service Center (Region XV)
West Texas Education Service Center (Region XVIII, Midland-Odessa)
McAllen Education Service Center
Kilgore Education Service Center (Region VII)
Alamo Heights I.S.D. (San Antonio, Texas)
Spring Branch I.S.D. (Houston, Texas)
Lubbock I.S.D. (Lubbock, Texas)
Dallas I.S.D. (Dallas, Texas)
Amarillo I.S.D. (Amarillo, Texas)
Texas Education Agency

Contributions to the University

Chairman, (1971-1973), Self-Study Committee on Special Activities; Ad Hoc Committee charged with the preparation of the "Special Activities" section of the 10-year report to the accreditation team of the Southern Association for Colleges and Universities. (Appointed)

Contributions to the University (continued)

Former Member (1969-1971), Confidential Advisory Committee to the University President and Academic Vice-President. (Appointed)

Former Member (1968-1971), Faculty Senate. (Elected)

Member, University Departmental Governance Committee. (Appointed)

Member, Executive Committee, School of Community Service. (Appointed)

Member, Executive Committee, Department of Economics. (Elected)

Member, Curriculum Committee, Department of Economics. (Elected)

Member, Tenure Committee, Department of Economics. (Elected)

Contributions to Community

Former Executive Director, Texas Council on Economic Education, (1968-1973).

Member Executive Committee, Texas Council on Economic Education, (Elected by membership).

Miscellaneous

Faculty Research Fellowship, Department of Planning and Economics, Gulf Oil Company, Pittsburgh, Pennsylvania, Summer, 1964.

Co-Director (with K. P. Cochran), National Science Foundation Summer Institute, North Texas State University, Summer, 1965. (Amount of grant: $35,000)

Co-Director (with H. O. Harley), HEW Institute in Statistical Methodology for Educational Research, Texas A & M University, Summer, 1966. (Amount of grant: $40,000)

Co-Director (with K. P. Cochran), National Science Foundation Summer Institute in Economics, North Texas State University, 1967-1969. (Amount of grants: $110,000)

Director National Science Foundation Summer Institutes in Economics, North Texas State University, 1970-1972. (Amount of grants: $110,000)

Miscellaneous (continued)

Director, National Science Foundation In-Service Institutes in Economics, Waco, Dallas, El Paso, 1970-1973. (Amount of grant: $20,000)

Director, Sears Foundation Summer Institute in Economics, North Texas State University, Summer, 1972. (Amount of grant: $10,000)

Director, Sears Foundation Summer Institute in Economics, Dallas, Texas, Summer, 1973. (Amount of grant: $10,000)

Co-Director (with Tom Holland), HEW, Title III Economics Curricular Development Grant, Dallas I.S.D., 1972-1973. (Amount of grant: $25,000)

Co-Director (with Tom Holland), U.S. Chamber of Commerce, Pilot Television Program, 1973-1974, Dallas, Texas. (Amount of grant: $100,000)

Co-Director (with L. Abernathy), Texas Education Agency World of Work Economic Education, Curriculum Development-Teacher Training Grant, 1971-1973, North Texas State University. (Amount of grant: $58,000)

Co-Director (with L. Abernathy) Texas Education Agency Multi-Media Delivery System Grant in World of Work Economic Education, 1973-1974, North Texas State University. (Amount of grant: $50,000)

Other

Outstanding Professor, College of Business Administration, Texas A & M University, 1964-1965, 1965-1966. (Elected by students)

Post-doctoral Fellowship, Summer 1969-1970, Carnegie-Mellon University, Pittsburgh, Pennsylvania. (Educational Research)

Co-Editor (with W. Black), *Southwestern Journal of Social Education*, Texas Council for the Social Studies.

APPENDIX C

PROGRAM SUMMARY

APPENDIX C

IN-SERVICE SEMINAR

The twenty hour in-service seminar incorporated six basic units of manpower-economic educational material. Each unit varied in time length; however, the average time allotted was just over three hours per unit. This permitted some administrative time for cognitive and conative pre- and posttesting of participants. The major points of emphasis in each unit are summarized below.

Unit One--The Individual and Nature of Work: This unit stressed the changes that are occurring in the world of work in America and the manner in which these changes influence and direct the future dimensions of work for the young men and women entering the labor market. The ideas about the nature of work and its relation to man as a means of making a living or a means of expressing himself were presented with a view toward the individuals' attainment of satisfaction or disappointment on the job. Most jobs have both positive and negative aspects for the worker, and it is the individual who plans his career wisely who will have the best chance of getting greater satisfaction from work and from life. Various case histories and studies of the importance of certain factors to different groups of workers set the stage for discussion of how workers rank their needs in deriving individual satisfaction from their jobs. Mental health effects of certain jobs, the opportunity for interpersonal relations, and the concommitant responsibilities this places on the worker in their judgments of justice and value systems were discussed in detail, using many case studies to illustrate significant points. That man cannot be viewed as just a means of production but as a human who has needs and that the individual who has the greatest awareness of the changing world of work will ultimately derive the greatest satisfaction were stressed.

Unit Two--The Economic World as Part of the Social Environment: In this unit, participants were introduced to economics as the study of how society organizes to satisfy its human wants. It is viewed as a social science that focuses on resources, technology, and institutions. The three basic problems--how much to produce, what to produce, and how to distribute the product--facing every system and the way in which economic institutions influence the use of resources were discussed. Distinctive features of the capitalistic economy formed the core of discussions of the economic system of the United States. The circular-flow model of economic activity was used to illustrate how the productive resources of labor, capital, and natural resources are combined to produce the needed goods and services. Emphasis was placed on the tools of economic thinking such as the need for theoretical models, the measuring device of productivity or income(GNP), consumer price indices, unemployment rates, and so on. Additionally, the important concepts of scarcity, opportunity costs, and choice were employed in a discussion of the principal that costs are involved in producing goods and services and that eventually somebody pays these costs. Goals of the American economic system--full employment and full production, stable growth without inflation, freedom of choice of consumers, workers and enterprisers, economic security, and distributive justice were discussed at length. The role of local, state, and federal governments in providing economic growth without inflation or unemployment was examined in some detail.

Unit Three--The Labor Market: The need for saleable skills on the part of workers to meet the requirements of employers and the means currently used as indicators of the functioning of the manpower market were discussed at length. Factors affecting the size and composition of the current and projected labor force were presented in considerable detail. In addition, there were discussion sessions centered about the advantages and disadvantages of the collective bargaining process, sources of aid to the job seeker, and employer expectations from workers. The causes and costs of unemployment, the composition of the unemployed force with emphasis on the effect of education, and the governmental and private programs for the unemployed were examined.

Unit Four--Career Opportunities: This unit concentrated on the existence of the great variety of jobs and the contributions they offer to producing the economy's goods and services. The growing field of service, the so-called white-collar jobs, and the educational requirements for many of these remunerative and satisfying jobs were discussed. The composition of the blue-collar and the service-workers labor force was closely scrutinized. The major point emphasized was the diminishing requirements for unskilled, untrained workers. The changing nature of industrial sources of employment from that of manufacturing to service-producers and projections of workers needed into the 1980's were analyzed.

Unit Five--Career Planning and Decision Making: The thrust of Unit Five was to present the necessity for young people to become aware that decisions must be based on fact and systematic analysis. The five steps in economic decision making (problem definition, goal identification, alternative solution analysis, probable outcome considerations, and solution selection) received special emphasis. The need for the individual to reexamine his aspirations and abilities periodically was discussed. A methodology for self-inventory of capabilities, interests, and experiences suitable for helping students in their decision making was presented.

Unit Six--Technology, Skills, and Education Investment: The impact which technology has had and will continue to have on career opportunities was discussed. The fact that technology is an important source of productivity growth and increased GNP was discussed in detail as well as the human problems this creates. Skills needed for today's jobs may not be adequate for the jobs of the future. The average worker can expect six major job changes during his work life. These factors as well as the need for education were stressed. The four skills which teachers can hopefully pass on to students with emphasis on their importance (the communicative, computational, manual dexterity and group organizational skills) were discussed. The need for education and the benefits and contribution it can make to future economic growth and worker well-being were analyzed.

APPENDIX D

IN-SERVICE AND SUMMER INSTITUTE PARTICIPANTS

APPENDIX D

IN-SERVICE AND SUMMER INSTITUTE PARTICIPANTS

In-service Seminars

Lubbock, Texas--November, 1971

Thalia Burks
Tahoka Junior High
Social Studies

Mary Lyn Farley
Littlefield Junior High
Social Studies

Roy Farmer
Lubbock High School
Industrial Arts

Nancy French
Littlefield Junior High
Spanish

Carolyn Goebel
W. H. Evans Junior High (Lubbock)
History

Mollie Hagood
Lubbock High School
Government

Dorothy Hall
Evans Jr. High (Lubbock)
English

LaFaun Humphreys
W. H. Evans Jr. High (Lubbock)
History

Charles Johnson
Matador I.S.D.
Guidance-Administrator

Nancy Jones
Matthews Junior High (Lubbock)
Social Studies

Leota Matthews
Lubbock High School
Administrator

Sam Parker
E. C. Struggs Jr. High (Lubbock)
Social Studies

Ruby Reid
Littlefield Junior High
Social Studies

Gordon Russell
Estacado High School (Lubbock)
Drafting

Tommy Thornhill
Lubbock High School
History

Hal Tunnell
O'Donnel I.S.D.
Superintendent

Lubbock, Texas--May, 1972

Lucille Ayer
South Elementary(Tahoka)
All Subjects

Peggy Blanton
Wester Elementary(Lubbock)
All Subjects

John Dudley
Monterey High School(Lubbock)
American History

Manley Gregory
Atkins Junior High(Lubbock)
Counselor

Jimmie Harvey
Wester Elementary(Lubbock)
All Subjects

Juanelle Hansard
Rush Elementary(Lubbock)
Social Studies

Mary Hill
Alderson Jr. High(Lubbock)
Texas History

Ethlyn Lewis
Wheatley Elementary(Lubbock)
Special Education

Jim S. Loud
Alderson Jr. High(Lubbock)
Mathematics

Mary Williams
W. H. Evans Jr. High(Lubbock)
World History

Jo Ann Zahn
Lubbock High School
Social Studies

Lula Bell Loud
Matthews Junior High(Lubbock)
Homemaking

La Vonne McKillip
Muleshoe Junior High
Science

Agnes McSpadden
Atkins Junior High(Lubbock)
Remedial Reading

Bertha Merrell
Matthews Junior High(Lubbock)
Spanish

Evelyn W. Murphy
Overton Elementary(Lubbock)
Social Studies

Wilma Rogers
Alamo Elementary(Paducah)
All Subjects

Barbara Taylor
Matthews Junior High(Lubbock)
Social Studies

Betty Teague
Wester Elementary(Lubbock)
All Subjects

Louise Wyatt
North Elementary(Tahoka)
All Subjects

Lubbock, Texas--May, 1972 (continued)

Larry York
Estacado High School(Lubbock)
Geography

Houston, Texas--February, 1972

Jimmy Alexander
Key Junior High
History

Lucy D. Arfsteer
Spring Branch Junior High
Social Studies

Albert Barrett
Woodson Junior High
History

Charles Bryant
Burbank Junior High
History

Antonette Cangelosi
Fondren Junior High(Stafford)
World History

Rebecca M. Cazares
Edison Junior High
World History

Bill Cooney
B. T. Washington Junior High
History

V. S. Crittenden
Johnson Junior High
History

May Forester
Landrum Junior High
Social Studies

Steven Gilbert
Dulles Junior High
Social Studies

Jacqueline Hemphill
J. S. Deady Junior High
History

Irma Henderson
Spring Oaks Junior High
Social Studies

Robert Miller
Marshall Junior High
History

Polly Moore
Miller Junior High
Social Studies

L. S. Mosley
McReynolds Junior High
History

Edith Maiser
Springwoods Junior High
Social Studies

Gerald Ray Oswald
Lanier Junior High
History

Caroline Penn
Spring Branch I.S.D.
Social Studies Coordinator

Houston, Texas--February, 1972 (continued)

Mary Lou Parkinson
Spring Forest Junior High
Social Studies

David Petty
Jane Long Junior High
Social Studies

Albert R. Reese
Thomas Junior High
History

Donna Robinson
Westchester Junior High
Social Studies

Denise Schneider
Attucks Junior High
American History

Jeanne M. Slaydon
Memorial Junior High
Social Studies

Charles Tuttle
Smiley High School (Humble)
Government

Marita Ullrich
Pershing Junior High
History

M. L. White
Black Junior High
History

S. O. Williams
Black Junior High
History

A. Young
Hogg Junior High
History

Waco, Texas--March, 1972

Marcus Anderson
Belton I.S.D.
Assistant Principal

Miller R. Brister
Waco High
Business

Sue Ann Ethridge
McGregor I.S.D.
Counselor

Jean E. Hughes
Lake Air Junior High
American History

Albert H. Leuschner
Jeff Moore High School
World History

Alexandria R. Logan
Lake Air Junior High
American History

Jean Lewis McReynolds
Waco High
Business

Clovis O. Neel
Waco I.S.D.
Voc-Tech Coordinator

Waco, Texas--March, 1972

Samuel W. Newman
Waco High Annex
English

Charles Wyatt Parton
Waco I.S.D.
Vocational Counselor

David Emmett Powley
Waco I.S.D.
Coordinator of Guidance

John C. Ramsey
Connally I.S.D.
Supervisor

El Paso, Texas--April, 1972

Kenneth L. Abrams, Jr.
Education Service Center XIX
Supervisory

Lucille P. Gore
Ross Junior High
Social Studies

Kay F. Starr
Dell City High School
Social Studies

French G. Lewis
Canutillo I.S.D.
American History

Joseph R. Lorio
Fabens Elementary
All Subjects

Robert Martinez
Education Service Center XIX
Supervisory

Pansey K. Matthews
Ross Junior High
American History

James H. Owen
Bel Air Junior High (Ysleta)
History

Dorothy Stephenson
Ross Junior High
American History

Summer Institute--June, 1972

Betty S. Baham
West Orange High School(Orange)
English

Ronald C. Berry
David Crockett Junior High(Odessa)
World History

Claude E. Carmichael
Matthews Junior High(Lubbock)
Social Studies

Larry L. Claflin
King High School(Kingsville)
Mathematics

Sherion N. Clark
Floyd Gunn Junior High(Arlington)
History

Summer Institute--June, 1972 (continued)

Jack Leroy Eggers
Oak Crest Junior High(San Antonio)
English

Crystal A. Flatt
McNiel Junior High(Wichita Falls)
Social Studies

William W. Ford
LaMarque High School(LaMarque)
World History

Roy E. Goldman
Victoria High School(Victoria)
Distributive Education

Robert L. Graham
Judson Junior High(Longview)
World History

Karen E. Greer
Grapevine Middle(Grapevine)
Homemaking

Albert E. Hudson
Lincoln Junior High(McAllen)
World History

Jerome Kasten
Bryan Adams High School(Richardson)
Civics

Julia B. Keller
William James Junior High(Fort Worth)
Communicative Skills

Bud Dale Rogers
Tascosa High School(Amarillo)
American History

Inez L. Silvas
Mann Junior High(Abilene)
Spanish

Roxy Smarzik
Richfield High School(Waco)
Sociology

Gloria Y. Stiggers
Daingerfield High School
History

Carlos R. Walker
Johnston High School(Austin)
American History

Karen L. Warwick
Del Norte Heights Jr. High(Ysleta)
American History

APPENDIX E

TEACHER ROSTER PHASE IV STUDY

APPENDIX E

TEACHER ROSTER-PHASE IV STUDY

Experimental Teacher	Control Teacher
El Paso Independent School District	
Pansy K. Matthews 9th Grade American History	None
Dorothy Stephenson 9th Grade American History	Mary M. Walker 9th Grade American History
Ysleta Independent School District	
James Owen 8th Grade History	Arthur S. Metcalfe 8th Grade History
Houston Independent School District	
Bill Cooney 8th Grade History	None
Spring Branch Independent School District	
Irma Henderson 7th Grade Social Studies	Inez Heggie 7th Grade Social Studies
Jeanne M. Slaydon 7th Grade Social Studies	McCarley 7th Grade Social Studies
LaMarque Independent School District	
William W. Ford 10th Grade World History	Gladys E. Cadd 10th Grade History
Waco Independent School District	
Al H. Leuschner 10th Grade World History	None
Arlington Independent School District	
Sherion Clark 8th Grade History	Edith Roberts 8th Grade History
Ector County Independent School District	
Ronald C. Berry 9th Grade World History	Lewis W. Keith 9th Grade World History

Experimental Teacher	Control Teacher
McAllen Independent School District	
Albert E. Hudson 9th Grade World History	A. R. Mittelstadt 9th Grade World History
Daingerfield Independent School District	
Gloria Stiggers 11th Grade History	Stanley Williams 9th Grade History

APPENDIX F

STUDY VARIABLE PHASE IV

APPENDIX F

PHASE IV STUDY VARIABLES

Variable Code	Date Collected	Variable Name	Description	Source
X_1	Fall, 1972	Experimental-Control	A dichotomized variable where 1= Experimental and 0= Control Teacher	(17)
X_2	Spring, 1973	Cognitive Posttest	Raw Score on the Cognitive Instrument. Scores range from a low of 0 to a high of 20.	Researcher-developed Instrument
X_3	Fall, 1972	Cognitive Pretest	Raw score on the Cognitive Instrument. Scores range from a low of 0 to a high of 20.	Researcher-developed Instrument
X_4	Fall, 1972	Companion Variable	Missing data points on cognitive pretest accounted for by substituting class mean. 1 = real data and 0 = mean substitution.	(4)
X_5	Spring, 1973	Conative Posttest	Raw Score on conative instrument. Range of 10 to 50 with 10 = strongly negative and 50 = strongly positive attitudes toward vocational occupations.	(20)
X_6	Fall, 1972	Conative Pretest	Same as X_5 but applicable to Conative Pretest.	(20)

Variable Code	Date Collected	Variable Name	Description	Source
X_7	Fall, 1972	Companion Variable	Same as X_4 but applicable to Conative Pretest.	(4)
X_8	Fall, 1972	Grade Level	Scholastic grade level of pupils. Range from seven to eleven.	Researcher-developed Instrument
X_9	Fall, 1972	Pupil Age	Pupils' age taken as of date of pretest.	Researcher-developed Instrument
X_{10}	Fall, 1972	Companion Variable	Missing data on pupil age accounted for by substituting class mean. 1 = real data and 0 = class mean substitution.	(4)
X_{11}	Fall, 1972	Pupil Sex	A dichotomized variable where 1 = male and 0 = female.	Researcher-developed Instrument
X_{12}	Fall, 1972	Parental Educational Level	A scaled value based on data submitted by pupils and scaled in accordance with Hollingshead instrument. Range from 4 to 28 with 4 = masters or higher degree and 28 = under 7 years of schooling.	Researcher-developed Instrument and (4)
X_{13}	Fall, 1972	Companion Variable	Missing data in Variable X_{12} accounted for by substitution of class mean. 1 = real data and 0 = class mean substitution.	(4)

Variable Code	Date Collected	Variable Name	Description	Source
X_{14}	Fall, 1972	Parental Occupation	A scaled value based on data submitted by pupils and scaled in accordance with Hollingshead instrument. Range from 7 to 49 with 7 = high level executives and major professionals and 49 = unskilled employees.	Researcher-developed Instrument and (4)
X_{15}	Fall, 1972	Companion Variable	Missing data in variable X_{14} accounted for by substitution of class mean. 1 = real data and 0 = class mean substitution.	(4)
X_{16}	Fall, 1972	Socioeconomic Index	Product of variables X_{12} and X_{14}.	(4)
X_{17}	Fall, 1972	Anglo	Dummy variable where 1 = Anglo and 0 = Nonanglo.	Researcher-developed Instrument
X_{18}	Fall, 1972	Black	Dummy variable where 1 = Black and 0 = Nonblack.	Researcher-developed Instrument
X_{19}	Fall, 1972	Pupil Work Experience	A dichotomized variable to indicate whether or not pupil worked either full or part time. 0 = Work experience and 1 = No work experience.	Researcher-developed Instrument

Variable Code	Date Collected	Variable Name	Description	Source
X_{20}	Fall, 1972	Pupil Scholastic Aptitude	"T" Score with higher values indicating better aptitudes.	Researcher-developed Instrument
X_{21}	Fall, 1972	Companion Variable	Missing data in variable X_{20} accounted for by class mean substitution. 1 = real data and 0 = class mean substitution.	(4)
X_{21a}	Fall, 1972	Interaction	Product of X_1 and X_{21}.	(4)
X_{22-30}	Fall, 1972	Geographical Region	A series of variables to control for differences in regional location of school districts. 000 000 001 - El Paso ISD 000 000 010 - Ysleta ISD 000 000 100 - Ector Co. ISD 000 001 000 - Waco ISD 000 010 000 - Houston ISD 000 100 000 - Spring Branch 001 000 000 - La Marque ISD 010 000 000 - McAllen ISD 100 000 000 - Arlington ISD 000 000 000 - Daingerfield ISD	(17)
X_{31}	Fall, 1972	Teacher Attitudes Toward Nonprofessional Work Modes	Raw score of teachers on attitudinal survey with a range of 30 (strongly negative) to 150 (strongly positive)	(17)

Variable Code	Date Collected	Variable Name	Description	Source
X_{32}	Fall, 1972	Summer Institute--In-service Seminar	Variable to control for differences attributable to the type training received by participating teachers with +1 = Summer Institute, -1 = In-service Seminar and 0 = No training (Control).	Manpower and Industrial Relations Institute records.
X_{33}	Fall, 1972	Teacher Sex	A dichotomized variable where 1 = male and 0 = female.	(17)
X_{34}	Fall, 1972	Experimental With/Without Control	Variable to control for differences attributable to presence or absence of a control teacher with +1 = Experimental with control, -1 = Experimental without control, 0 = control teacher	Study Records
X_{35}	Fall, 1972	School Voc-Ed Program	A dichotomized variable to control for differences attributable to presence or absence of an active vocational education program with 0 = Program in operation and 1 = No program.	(17)
X_{36}	Fall, 1972	Teacher Age	A numerical number corresponding to the age of the teacher..	(17)

Variable Code	Date Collected	Variable Name	Description	Source
X_{37}	Fall, 1972	Teacher Educational Level	A dichotomized variable where 0 = B.S. or equivalent and 1 = Higher than B.S.	(17)

APPENDIX G

STUDY INSTRUMENTS

STUDENT-DATA QUESTIONNAIRE

NAME ____

GRADE ____________________ TODAY'S DATE ____________________

AGE ____________________ SEX ____________________

TEACHER'S NAME ____________________ CLASS ______________

EDUCATIONAL LEVEL OF HEAD OF FAMILY:

a. Less than grade school
b. Grade school
c. Junior High School
d. High School
e. One Year of College
f. Two Years of College
g. Three Years of College
h. Four Years of College
i. More than Four Years of College
j. I Don't Know

WHAT JOB DOES HEAD OF THE FAMILY DO? ____________________

DO YOU WORK EITHER PART OR FULL TIME AT A JOB FOR WHICH YOU RECEIVE PAY? ____________________

OTHER (Teacher entered data on Scholastic Aptitude and race)

TWO-FACTOR INDEX OF SOCIAL POSITION

August B. Hollingshead
Yale University

Brief Instructions.

The Two-factor Index utilized occupation and education. These factors are scaled and weighted individually, and a single score is obtained.

The educational scale is based upon the years of school completed by the head of the household. The scale values are as follows:

Years of School Completed	Scale Value
Professional (MA, MS, ME, MD, PhD, LLB, etc)	1
Four-year college graduate (AB, BS, BM)	2
1-3 years college (also business schools)	3
High school graduate	4
10-11 years of school (part high school)	5
7-9 years of school	6
Under 7 years of school	7

The occupational scale is attached on a separate sheet. Its effective use is dependent on the precise knowledge of the head of the household's occupation. Occupational position has a factor weight of 7 and educational position a factor weight of 4. These weights are multiplied by the scale value for education and occupation of each individual or head of a household. The calculated weighted score gives the approximate position of the family on the overall scale. For example, John Smith is the manager of a Safeway Store; he completed high school and one year of business college. I would score him as follows:

Factor	Scale Score	Factor Weight	Score x Weight
Occupation	3	7	21
Education	3	4	12
	Index of Social Position Score...		33

When the Index of Social Position score is calculated, the individual may be stratified either on the continuum of scores or into a "class." In the case of John Smith, I would rate him a Class III on the basis of the position he occupies on the continuum of scores and the way the scores are grouped into classes.

The range of scores in each class on the Two-factor Index follows:

Class	ISP Scores
I	11-17
II	18-31
III	32-47
IV	48-63
V	64-77

The various combinations of scale scores for occupation and education are reproducible in the Guttman sense, for there is no overlap between education-occupation combinations. If an individual's education and occupation are known, one can calculate his score. Conversely, if one knows an individual's score, he can calculate both occupational position and educational level.

We have made extensive studies of the reliability of scoring and the validity of the Index on over one hundred variables in our Social Stratification and Psychiatric Disorders Study. We have also made studies of loss of precision in using the Two-factor Index rather than the three-factor one of occupation, education, and ecological area of residence. We recommend the Two-factor one in areas where ecological maps do not exist.

LIST OF JOBS

1. Higher Executives of Large Concerns, Owners, and Major Professionals.

A. Higher Executives

Bank presidents
Vice-presidents
Assistant vice-presidents
Business: directors
  presidents
  vice-presidents
Assistant vice-presidents
Executive secretary
Research directors
Treasurer

B. Owners of very Large Businesses.

Brokers
Contractors
Dairy Owners
Farmers
Lumber dealers

C. Major Professionals.

Accountants (CPA)
Actuaries
Agronomists
Architects
Artists, portrait
Astronomers
Auditors
Bacteriologists
Chemical Engineers
Chemists
Clergymen (professional trained)
Dentists
Doctors
Economists
Engineers (college graduates)
Foresters
Geologists
Judges (Superior courts)
Lawyers
Metallurgists
Military: Comm. officers, Major and above
Officials of the Executive Branch of Government, Federal, State, Local; e.g., Mayor, City Manager, City
Plan Director, Internal Revenue directors.
Physicists, Research
Psychologists, practicing
Symphony conductor
Teachers, university, college
Veterinarians (veterinary surgeons)

2. Business Managers, Owners of Medium Sized Businesses, and Lesser Professionals.

A. Business Managers in Large Concerns

Advertising directors
Branch managers
Brokerage salesmen
Directors of purchasing
District managers
Executive assistants
Export managers, Int. concern
Govt. officials, minor; e.g., Internal Revenue agents
Farm managers
Manufacturers's representatives
Office managers
Personnel managers
Police chief; sheriff
Postmaster
Production managers
Sales engineers
Sales managers, national concerns
Store managers

B. Owners of Medium Businesses

Advertising
Clothing store
Contractors
Express Company
Fruits, wholesale
Furniture business
Jewelers
Farm owners
Poultry business
Real estate brokers
Rug business
Store
Theater

C. Lesser Professionals

Accountants (not CPA)
Chiropodists
Correction officers
Director of Community House
Engineers (not college grad.)
Finance writers
Health educators
Labor relations consultants
Librarians
Military: comm. officers, Lts., Captain
Musicians (symphony orchestra)
Nurses
Opticians
Optometrists, D. O.
Pharmacists
Public health officers (MPH)
Research assistants, univ. (full-time)
Social workers
Teachers, elementary & high school

3. Administrative Personnel, Owners of Small Businesses, and Minor Professionals

A. Administrative Personnel

Advertising agents
Chief clerks
Credit managers
Insurance agents
Section heads, Federal, State and Local governmental offices
Section heads, large businesses and industries

(3. Administrative Personnel (continued)

- Managers, departments
- Passenger agents -- RR
- Private secretaries
- Purchasing agents
- Sales representatives
- Service managers
- Store managers (chain)
- Shop managers
- Traffic managers

B. Small Business Owners

- Art gallery
- Auto accessories
- Awnings
- Bakery
- Beauty shop
- Boatyard
- Brokerage, insurance
- Car dealers
- Cattle dealers
- Cigarette machines
- Cleaning shops
- Clothing
- Coal businesses
- Convalescent homes
- Contracting Businesses
- Garage
- Gas station
- Glassware
- Grocery - general
- Hotel proprietors
- Jewelry
- Machinery brokers
- Manufacturing
- Monuments
- Music
- Package stores (liquor)
- Paint Contracting
- Poultry
- Real estate
- Decorating
- Dog supplies
- Dry Goods
- Engraving business
- Feed
- Finance companies, local
- Fire extinguishers
- Five and Dime
- Florist
- Food equipment
- Food products
- Foundry
- Funeral directors
- Furniture

- Records and radios
- Restaurant
- Roofing contractor
- Shoe
- Signs
- Tavern
- Taxi company
- Tire shop
- Trucking
- Trucks and tractors
- Upholstery
- Wholesale outlets
- Window shades

C. Semi-professionals

- Actors and showmen
- Army M/Sgt; Navy, CPO
- Artists, commercial
- Appraisers (estimators)
- Clergymen (not prof. trained)
- Concern managers
- Deputy sheriffs
- Interior decorators
- Interpreters, courts
- Physio-therapists
- Piano teachers
- Publicity and public relations
- Radio, TV announcers
- Reporters, court
- Reporters, newspapers
- Surveyors
- Title searchers
- Tool designers

(3. Semi-professionals (continued)

Laboratory assistants
Landscape planners
Morticians
Oral Hygienists
Travel agents
Yard masters, RR
Dispatchers, RR
Photographers

D. Farmers

Farm owners (Large Farm)

4. Clerical and Sales Workers, Technicians, and Owners of Little Businesses.

A. Clerical and Sales Workers

Bank clerks and tellers
Bill collectors
Bookkeepers
Business machine operators, offices
Claims examiners
Clerical or stenographic
conductors, RR
Factory storekeepers
Factory supervisors
Post office clerks
Route managers
Sales clerks
Sergeants and petty officers, military services
Shipping clerks
Supervisors, utilities, factories
Supervisors, toll stations
Warehouse clerks

B. Technicians

Dental technicians
Draftsmen
Driving teachers
Expeditor, factory
Experimental tester
Instructors, telephone co., factory
Inspectors, weights, sanitary RR, factory
Investigators
Laboratory technicians
Locomotive engineers
Operators, P.B.X.
Proofreaders
Safety supervisors
Supervisors of maintenance
Technical assistants
Telephone co. supervisors
Timekeepers
Tower operators, RR
Truck dispatchers
Window trimmers (stores)

C. Owners of Little Businesses

Flower shop
Grocery
Newstand
Tailor shop

D. Farmers

Owners (small farm)

5. Skilled Manual Employees

- Auto body repairers
- Bakers
- Barbers
- Blacksmiths
- Bookbinders.
- Boilermakers
- Brakemen, RR
- Brewers
- Bulldozer Operators
- Butchers
- Cabinet makers
- Cable splicers
- Carpenters
- Casters (founders)
- Cement finishers
- Cheese makers
- Chefs
- Compositors
- Diemakers
- Diesel shovel operators
- Electricians
- Engravers
- Exterminators
- Fitters, gas, steam
- Firemen, RR
- Foremen, construction, dairy
- Gardners, landscape (trained)
- Glass blowers
- Glaziers
- Gunsmiths
- Guage makers
- Repairmen, home sppliances
- Rope splicers
- Sheetmetal workers (trained)
- Shipsmiths
- Shoe repairmen (trained)
- Stationary engineers (licensed)
- Stewards, club
- Switchmen, RR
- Tailors (trained)
- Teletype operators
- Tool makers
- Track supervisors, RR
- Tractor-trailer trans.
- Hair stylists
- Heat treaters
- Horticulturists
- Linemen, utility
- Linotype operators
- Lithographers
- Locksmiths
- Loom fixers
- Machinists (trained)
- Maintenance Foremen
- Linoleum Layers (trained)
- Masons
- Masseurs
- Mechanics (trained)
- Millwrights
- Moulders (trained)
- Painters
- Paperhangers
- Patrolemen, RR
- Pattern and model makers
- Piano builders
- Piano tuners
- Plumbers
- Policemen, city
- Postmen
- Printers
- Radio, TV maintenance
- Diesel engine repair and maintenance (trained)
- Typographers
- Upholsters (trained)
- Watchmakers
- Weavers
- Welders
- Yard supervisors, RR

Small Farmers

- Owners (Little Farms)
- Tenants who own farm equipment

6. Machine Operators and Semi-skilled Employees

Aides, hospital
Apprentices, electricians, printers, steam fitters, toolmakers
Assembly line workers
Bartenders
Bingo tenders
Bridge tenders
Building superintendents (const.)
Bus drivers
Checkers
Coin machine fillers
Cooks, short order
Deliverymen
Dressmakers, machine
Elevator operators
Enlisted men, military services
Filers, sanders, buffers
Foundary workers
Garage and gas station attendants
Greenhouse workers
Guards, doorkeepers, watchmen
Hairdressers
Housekeepers
Meat cutters and packers
Meter readers
Operators, factory machines
Oilers, RR
Practical nurses
Pressers, clothing
Pump operators
Receivers and checkers
Roofers
Set-up men, factories
Shapers
Signalmen, RR
Solderers, factory
Sprayers, paint
Steelworkers (not skilled)
Stranders, wire machines
Strippers, rubber factory
Taxi drivers
Testers
Timers
Tire moulders
Trainmen, RR
Truck drivers, general
Waiters-waitresses ("Better Places")
Weighers
Welders, spot
Winders, machine
Wiredrawers, machine
Wine bottlers
Wood workers, machine
Wrappers, stores and factories

Farmers

Smaller tenants who own little equipment

7. General Workers

Amusement park workers (bowling alleys, pool rooms)
Ash removers
Attendents, parking lots
Cafeteria workers
Car cleaners, RR
Carriers, coal
Countermen
Laborers, construction
Laborers, unspecified
Laundry workers
Messengers
Platform men, RR
Peddlers
Porters
Roofer's helpers
Shirt folders

(7. General Workers (continued)

Dairy workers
Deck hands
Domestics
Farm helpers
Fishermen (clam diggers)
Freight handlers
Garbage collectors
Grave diggers
Hod carrier
Hog killers
Hospital workers,
  unspecified
Hostlers, RR
Janitors (sweepers)
Relief, public, private

Shoe shiners
Sorters, rag and salvage
Stage hands
Stevedores
Stock handlers
Street cleaners
Unskilled factory workers
Struckmen, RR
Waitresses ("Hash Houses")
Washers, cars
Window cleaners
Woodchoppers
Unemployed (no occupation)

Farmers

Share croppers

TEST A

TEST OF UNDERSTANDING IN WOWEE

PART ONE

DO NOT MARK ON THIS BOOKLET!

DIRECTIONS

On the answer sheet please write in your name on the space provided. The sentences beginning on the next page contain ideas about jobs and working. Please read each statement very carefully. Then decide if the statement is correct or incorrect. If it is correct circle the YES on the answer sheet being sure the question number on this booklet matches the answer number on the answer sheet. If the statement is incorrect, circle the NO of the matching number on the answer sheet.

FOR EXAMPLE:

1. Any person should be able to do any type work. YES NO.

NO is the proper answer because different jobs may require different skills, education, and physical abilities. Not all people have the same skills, education, or abilities. So, the answer sheet would be marked like this:

TEST "A" ANSWER SHEET

	PART I			PART II	
1.	YES	[✓ NO]	21.	YES	NO
2.	YES	NO	22.	YES	NO

Now continue on to the next question. Do you have any questions?

PART ONE

1. The average person can expect to spend about one-third of his adult life working.

2. The U. S. Department of Labor claims that a person will make several major job changes during his "work life."

3. A person who carefully lists and studies all of his abilities will always be able to single out the one job for which he is best suited.

4. The preparations needed to start a career include both educational as well as other experience needed to obtain a job.

5. Records show that in recent years, three out of every ten persons who started the first grade dropped out before finishing high school.

6. To become an engineer, such as an electrical or mechanical engineer, usually requires only that you finish high school and complete a two-year technical school.

7. A person who thinks of himself as "shy" would probably be happy selling insurance.

8. Unskilled workers are more often out of a job than are skilled craftsmen.

9. When an employer is looking for someone to hire, a person's skills and ability to do the job are usually more important than his education, mental ability, or need for the money.

10. The first step, and frequently the hardest, in making a good decision is to know what the problem is.

11. Other than working on the job yourself, the next best way of learning what a job is like is to visit a place where the job is being done and talk to someone who does the job.

12. In choosing a career, whether or not you will be happy in that work is more important than the pay.

13. Awareness of the feelings and needs of other people is a necessary part of life; however, on the job, it is best to ignore the needs of others.

14. In the near future, the need for workers in the field of service to others is expected to grow faster than in the clerical, technical, or outdoor fields.

15. The term "employment outlook of a job" means the demand which exists for workers, where workers are located, and where they must be located in the future.

16. The result of workers becoming specialists is that the total amount of goods and services that a country can produce is increased.

17. The term "economic resources" means everything that can be used to produce a good or service.

18. Because we have so many resources, there is no limit to the amount of goods and services we can produce.

19. The greatest amount of goods and services which a nation can produce each year is set by how many resources it has, the numbers and skills of its workers, and its methods of production.

20. The "opportunity cost" of getting certain goods or services is what we give up for other goods or services.

YOU HAVE FINISHED PART ONE. BE SURE YOU HAVE ANSWERED ALL QUESTIONS.

TURN THIS BOOKLET IN TO THE TEACHER AND GET PART TWO.

TEST A

TEST OF UNDERSTANDING IN WOWEE

PART TWO

DO NOT MARK ON THIS BOOKLET!

DIRECTIONS

This is Part Two. This test has twenty statements that you are to answer "YES" or "NO" just as you did for Part One. Read each statement carefully, decide, and circle "YES" or "NO" on the answer sheet. Be sure your answer sheet numbers match the statement numbers.

21. Working will occupy most of your adult life.

22. Figures used by the Department of Labor show that most people seldom, if ever, make a major job change during their work life.

23. A person who takes a careful look at all the things he can do may find several jobs or occupations for which he is well-suited.

24. In order to enter any career, getting an education is the only thing you will need to get a job.

25. Recently it has been shown that, of all persons who started the first grade, at least eight out of ten will finish high school.

26. If you decide that your goal in life is to be an engineer, you should expect that four or five years of college work will be required before you reach that goal.

27. A person whom others consider likeable and friendly may do well in a job that requires frequent and close contact with the public.

28. During times when jobs are hard to find, the unskilled worker is just as likely to find a job as any other worker is.

29. When jobs are hard to find and there are many people trying to get a certain job, most employers will give first consideration to the person who has the largest family to support.

30. By following a logical sequence of reasoning, one will always arrive at an answer that is clearly better than all other choices.

31. If you are trying to find out what a certain job is like, it is best not to talk to anyone who does that job, but instead you should read a book or watch a motion picture about the job.

32. Feeling important, an impressive title, and pay are more important than the enjoyment and satisfaction you will get out of working at a particular job.

33. On the job, we must remain sensitive to the needs of many people including ourselves, other workers, and our employer.

34. Because of computers, automation, and greater use of complicated machinery, the demand for workers in the technical career field will increase faster than any other field.

35. The "employment outlook" of a job refers only to the number of jobs expected to be available some time in the future.

36. A worker who specialized in a job will not be able to provide as well for his family as a person who can do everything for himself.

37. A nation's "economic resources" consist only of its natural raw materials such as water, trees, land, oil, gas, and other minerals.

38. All countries have one thing in common--none have all the resources needed to produce all the goods and services they want.

39. The United States Government controls the total amount of goods and services produced each year by telling each producer how much of his product he can make each year.

40. The difference in buying a shirt at one store for five dollars when the same shirt is on sale for three dollars at another store is called "opportunity cost."

YOU HAVE FINISHED THIS QUESTIONNAIRE. Now, go back and be sure you have answered each statement.

NAME ______________________________

"WERE I A WORKER. . ."

General Instructions

1. Give copies to the students.

I want to find out how you think you would feel if you were a worker. As you look at the pictures, pretend that the worker is you. If you think you would feel very excited about being this worker, place an "X" in the first blank

Excited _X_ ___ ___ ___ ___ Bored

If you think you would feel a little excited, place an "X" in the second blank

Excited ___ _X_ ___ ___ ___ Bored

If you think you would feel a little bored, place an "X" in the fourth blank

Excited ___ ___ ___ _X_ ___ Bored

If you think you would feel very bored, place an "X" in the last blank

Excited ___ ___ ___ ___ _X_ Bored

If you aren't sure how you would feel, place an "X" in the middle blank

Excited ___ ___ _X_ ___ ___ Bored

Now go on to the second set of terms.

2. If you have any questions please ask. Now look at the form below.

This is how you would mark the form if you imagined yourself as a singer and felt a little bored, very kind, very clean, a little like a leader, very pleasant, very unselfish, a little upset, a little unimportant, very beautiful and very smart: Were I a singer, I would feel

Excited ___ ___ ___ _X_ ___ Bored

Mean ___ ___ ___ ___ _X_ Kind

Clean _X_ ___ ___ ___ ___ Dirty

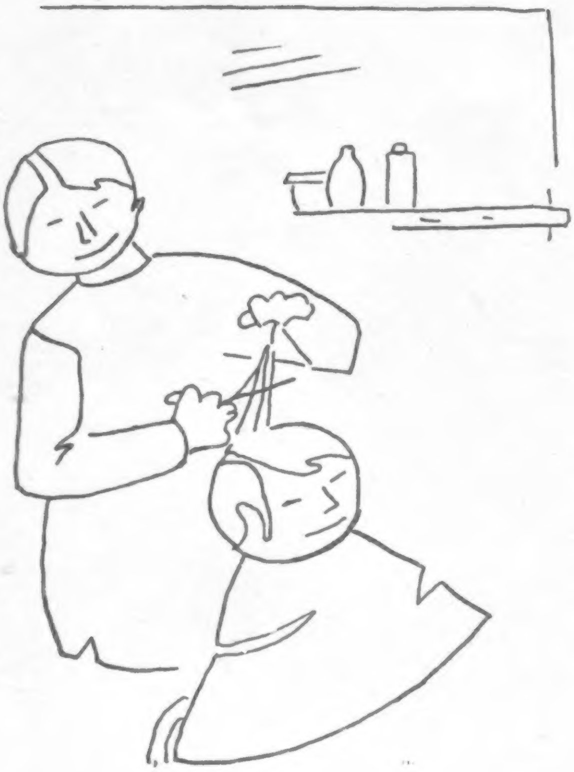
A Leader ___ _X_ ___ ___ ___ A follower

Pleasant _X_ ___ ___ ___ ___ Unpleasant

Selfish					X	Unselfish
Upset		X				Satisfied
Important				X		Unimportant
Beautiful	X					Ugly
Smart	X					Dumb

3. Any questions? If not, turn the page to the drawing illustrating a Barber. "This is a Barber; how do you think you would feel if you were a Barber?" Mark how you would feel and continue on through the booklet.

WERE I A BARBER



I WOULD FEEL . . .

Excited ____ ____ ____ ____ ____ Bored

Mean ____ ____ ____ ____ ____ Kind

Clean ____ ____ ____ ____ ____ Dirty

A Leader ____ ____ ____ ____ ____ A Follower

Pleasant ____ ____ ____ ____ ____ Unpleasant

Selfish ____ ____ ____ ____ ____ Unselfish

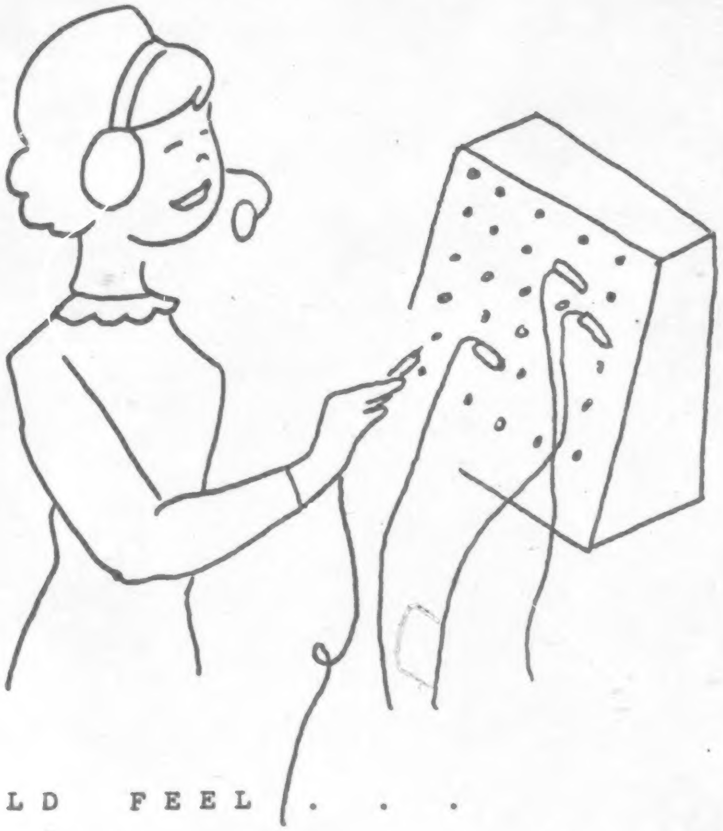
Upset ____ ____ ____ ____ ____ Satisfied

Important ____ ____ ____ ____ ____ Unimportant

Beautiful ____ ____ ____ ____ ____ Ugly

Smart ____ ____ ____ ____ ____ Dumb

WERE I A TELEPHONE OPERATOR



I WOULD FEEL . . .

Excited ____ ____ ____ ____ ____ Bored

Mean ____ ____ ____ ____ ____ Kind

Clean ____ ____ ____ ____ ____ Dirty

A Leader ____ ____ ____ ____ ____ A Follower

Pleasant ____ ____ ____ ____ ____ Unpleasant

Selfish ____ ____ ____ ____ ____ Unselfish

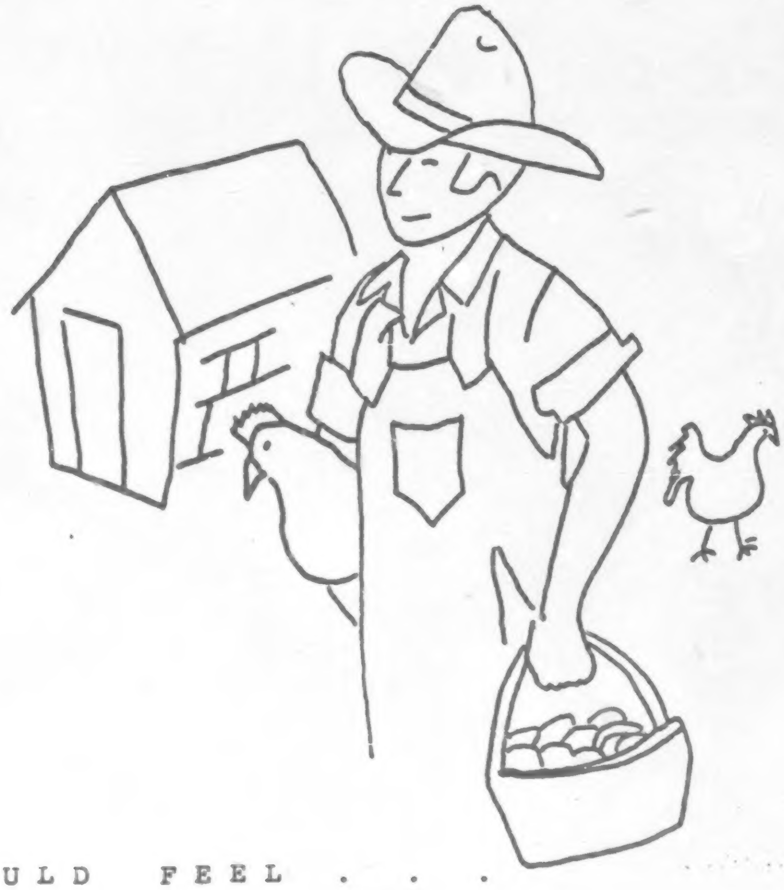
Upset ____ ____ ____ ____ ____ Satisfied

Important ____ ____ ____ ____ ____ Unimportant

Beautiful ____ ____ ____ ____ ____ Ugly

Smart ____ ____ ____ ____ ____ Dumb

WERE I A POULTRYMAN



I WOULD FEEL . . .

Excited ____ ____ ____ ____ ____ Bored

Mean ____ ____ ____ ____ ____ Kind

Clean ____ ____ ____ ____ ____ Dirty

A Leader ____ ____ ____ ____ ____ A Follower

Pleasant ____ ____ ____ ____ ____ Unpleasant

Selfish ____ ____ ____ ____ ____ Unselfish

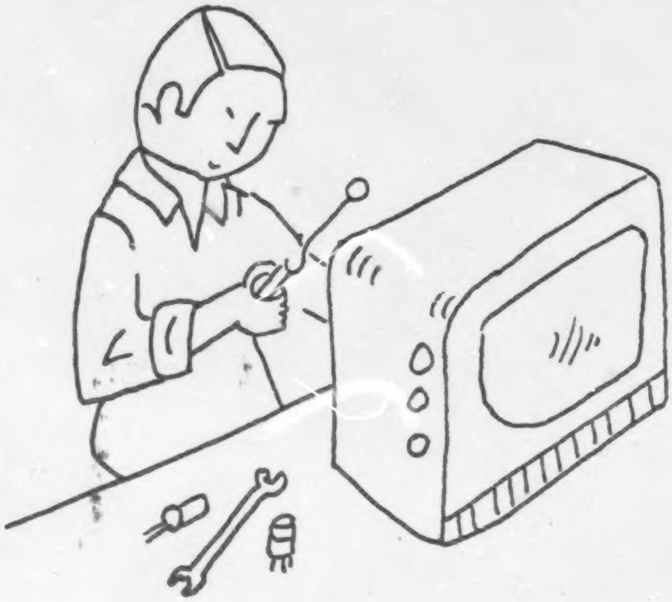
Upset ____ ____ ____ ____ ____ Satisfied

Important ____ ____ ____ ____ ____ Unimportant

Beautiful ____ ____ ____ ____ ____ Ugly

Smart ____ ____ ____ ____ ____ Dumb

WERE I A TV REPAIRMAN



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean ____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

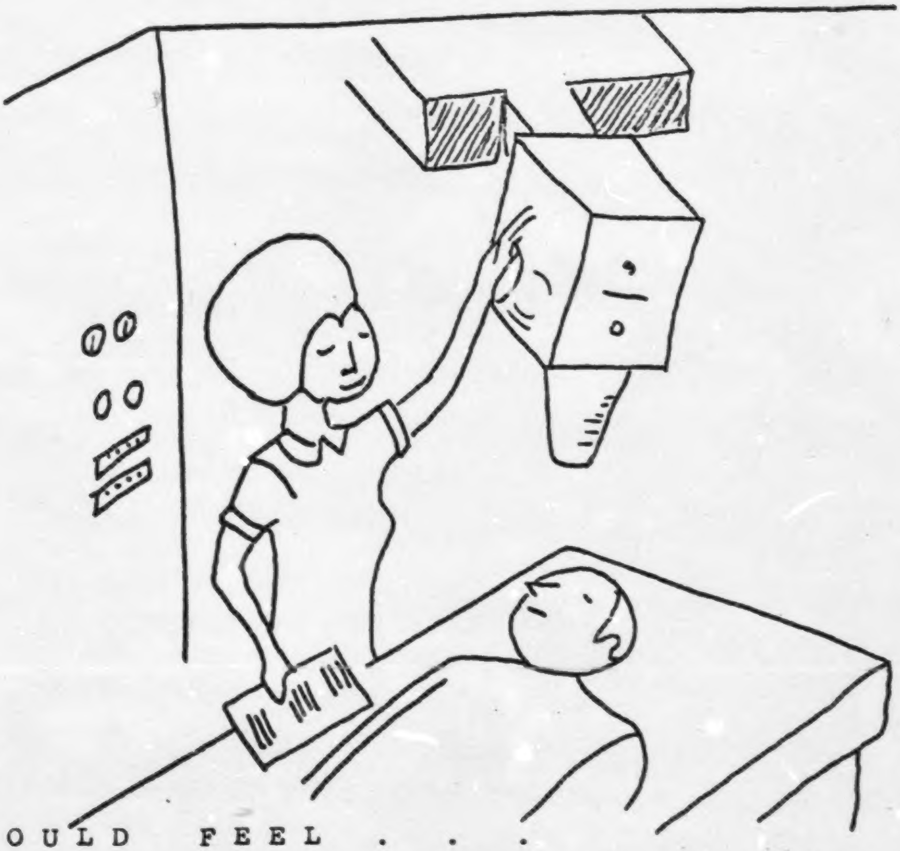
Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I AN X-RAY TECHNICIAN



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean ____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

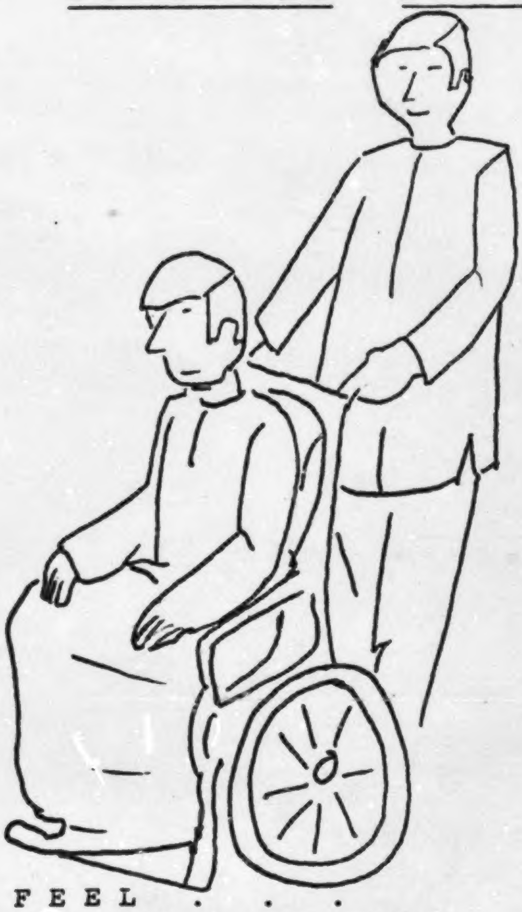
Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I A HOSPITAL ATTENDANT



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean ____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

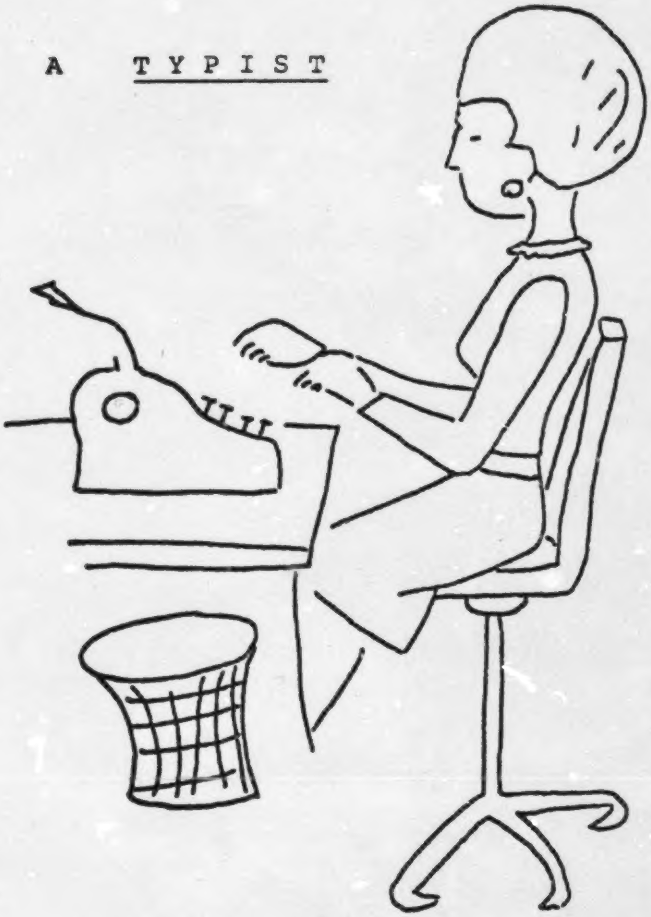
Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I A TYPIST



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

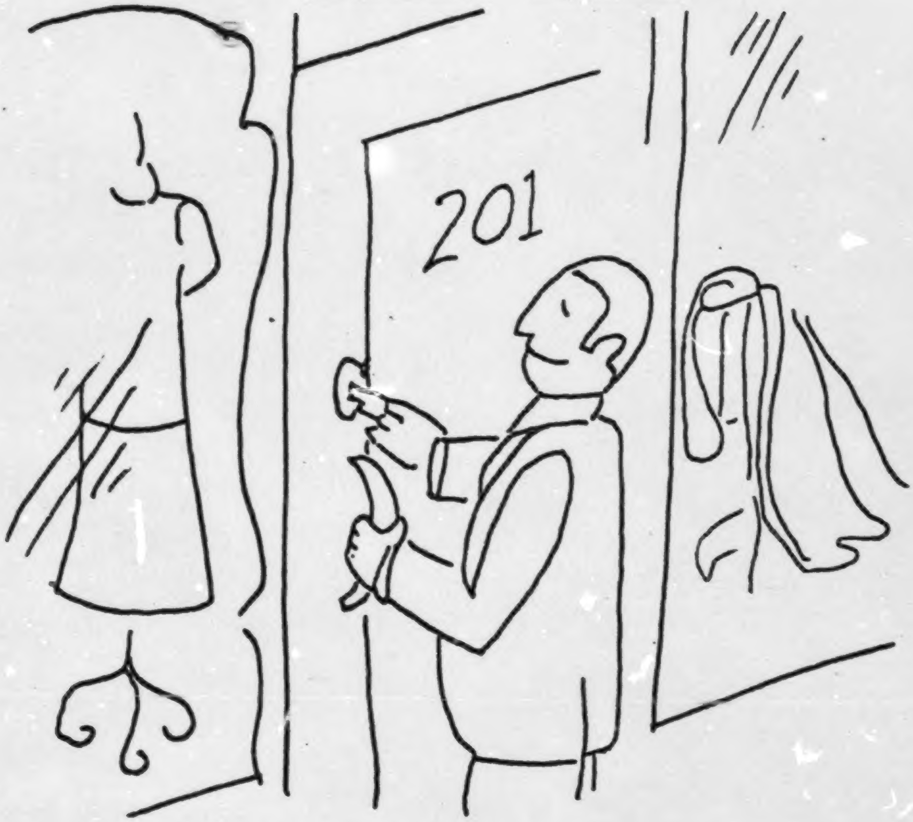
Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I A STORE OWNER



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

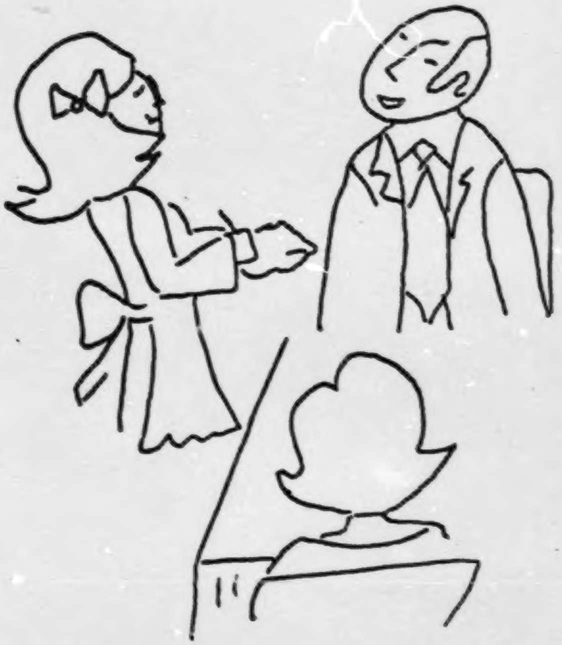
Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I A WAITRESS



I WOULD FEEL . . .

Excited ____ ____ ____ ____ ____ Bored

Mean ____ ____ ____ ____ ____ Kind

Clean ____ ____ ____ ____ ____ Dirty

A Leader ____ ____ ____ ____ ____ A Follower

Pleasant ____ ____ ____ ____ ____ Unpleasant

Selfish ____ ____ ____ ____ ____ Unselfish

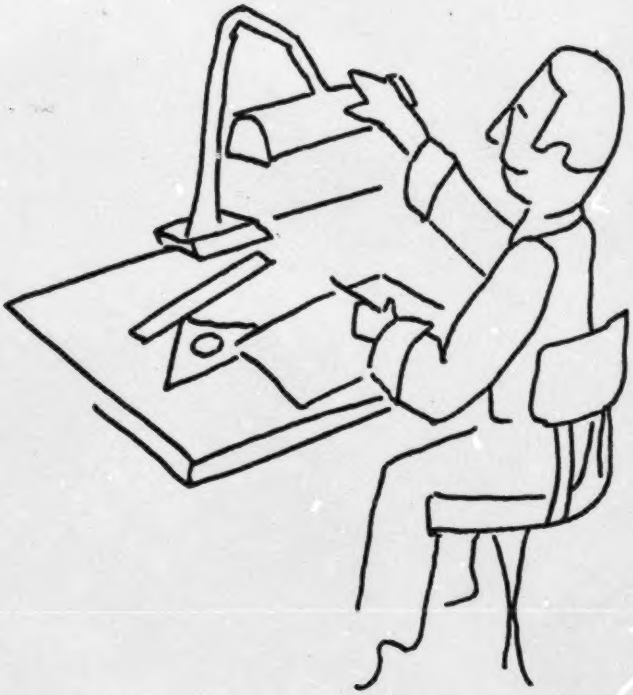
Upset ____ ____ ____ ____ ____ Satisfied

Important ____ ____ ____ ____ ____ Unimportant

Beautiful ____ ____ ____ ____ ____ Ugly

Smart ____ ____ ____ ____ ____ Dumb

WERE I AN ARCHITECT



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

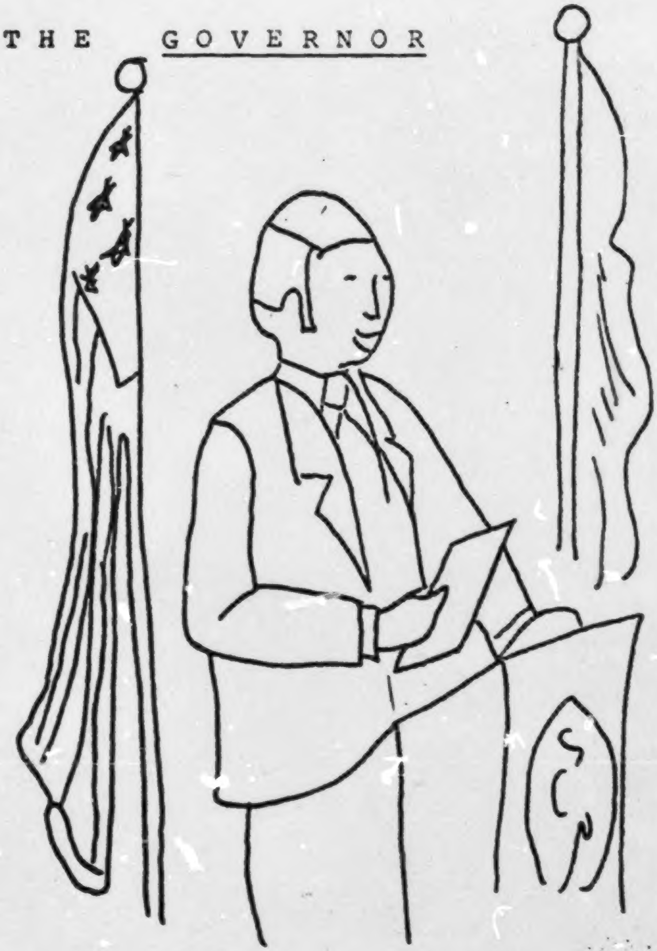
Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I THE GOVERNOR



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I A CARTOONIST

I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

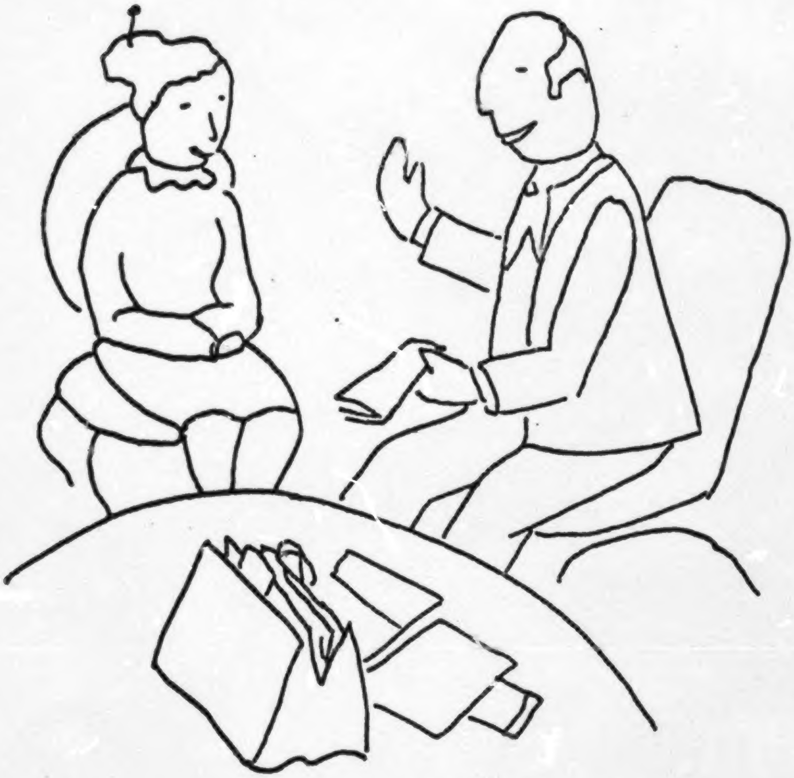
Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I AN INSURANCE SALESMAN



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

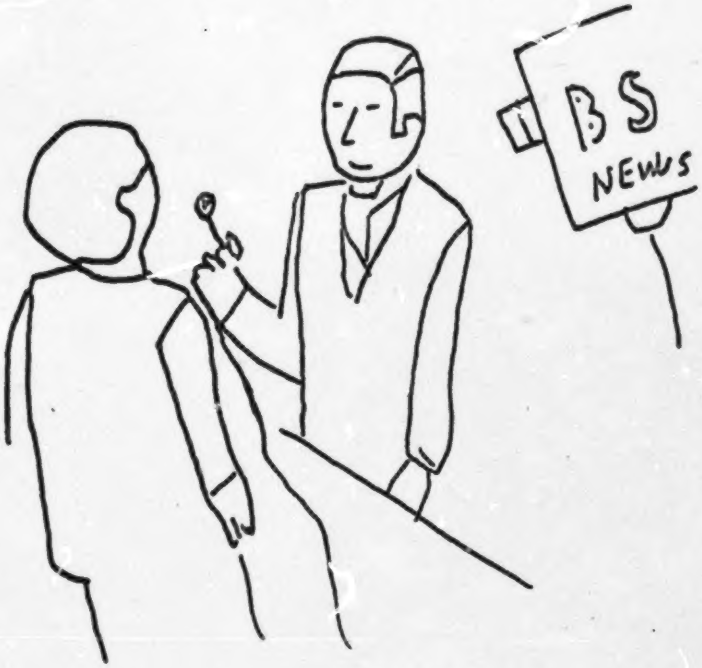
Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

WERE I A TV NEWSMAN



I WOULD FEEL . . .

Excited ____ ____ ____ ____ ____ Bored

Mean ____ ____ ____ ____ ____ Kind

Clean ____ ____ ____ ____ ____ Dirty

A Leader ____ ____ ____ ____ ____ A Follower

Pleasant ____ ____ ____ ____ ____ Unpleasant

Selfish ____ ____ ____ ____ ____ Unselfish

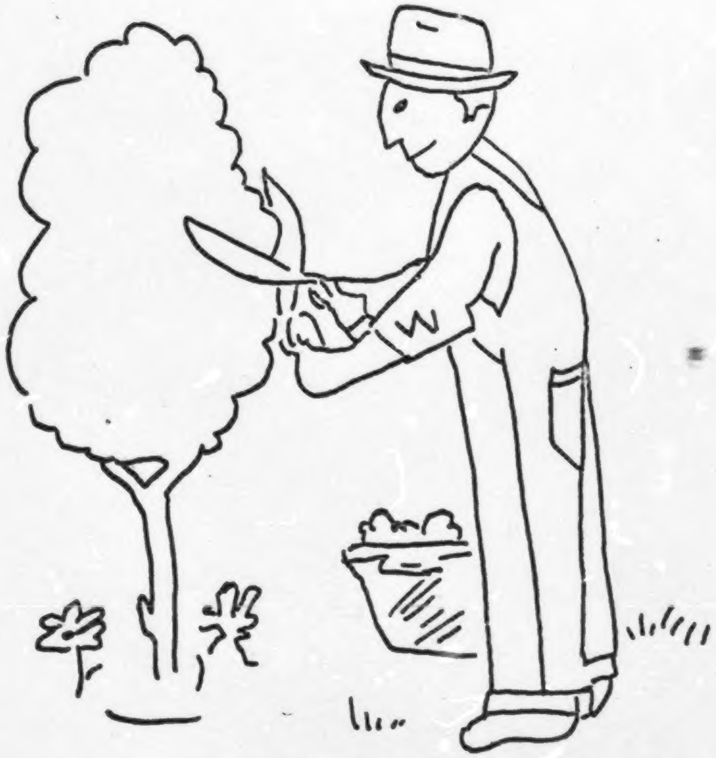
Upset ____ ____ ____ ____ ____ Satisfied

Important ____ ____ ____ ____ ____ Unimportant

Beautiful ____ ____ ____ ____ ____ Ugly

Smart ____ ____ ____ ____ ____ Dumb

WERE I A LANDSCAPE GARDENER



I WOULD FEEL . . .

Excited____ ____ ____ ____ ____ Bored

Mean____ ____ ____ ____ ____ Kind

Clean____ ____ ____ ____ ____ Dirty

A Leader____ ____ ____ ____ ____ A Follower

Pleasant____ ____ ____ ____ ____ Unpleasant

Selfish____ ____ ____ ____ ____ Unselfish

Upset____ ____ ____ ____ ____ Satisfied

Important____ ____ ____ ____ ____ Unimportant

Beautiful____ ____ ____ ____ ____ Ugly

Smart____ ____ ____ ____ ____ Dumb

"WERE I A WORKER"

SCORING INSTRUCTIONS

This instrument was used to measure the students' attitude toward various vocational-technical occupations. Attitudinal tendency is measured by a scale of one on the negative side to five on the positive side for the given set of descriptive terms, as in the following example:

Excited	5	4	3	2	1	Bored
Mean	1	2	3	4	5	Kind
Clean	5	4	3	2	1	Dirty
A Leader	5	4	4	2	1	A Follower
Pleasant	5	4	3	2	1	Unpleasant
Selfish	1	2	3	4	5	Unselfish
Upset	1	2	3	4	5	Satisfied
Important	5	4	3	2	1	Unimportant
Beautiful	5	4	3	2	1	Ugly
Smart	5	4	3	2	1	Dumb

For each occupation, the student is scored depending upon his markings of the scale resulting in a score ranging from 10 (most negative) to 50 (most positive).

TEACHERS' QUESTIONNAIRE

As participants in the Manpower-Economic Education Program, we would like to have your opinions on vocational education. Therefore, we would appreciate your cooperation in filling out this questionnaire. We would like you to provide us with the information below. Please be sure to fill in all the information before starting to read the instructions for responding to the questionnaire. Your responses are confidential and will be treated accordingly. When you have completed the questionnaire, please place it in the attached envelope and seal it.

Today's date:____________ Name:______________________________

School:__________________ School District:___________________

Year of Birth:_________ Sex:_____ Highest Degree Obtained:____

Functions and Areas: (Check functions and identify area)

Teacher________________________________

Academic Subject Area______________

Vocational Subject Area___________ (including business)

Counselor______________________________

Counseling Area____________________

Administrative Area________________

Other__________________________________

Grade Level of your Students: (Teachers, please check one)

Elementary (1-6)____

Junior High(7-9)____

Senior High(10-12)__

Full-time: Yes__No__ (check one)

Does the school where you teach have a Vocational-Technical Training Program in operation?

Yes________ No_______

TURN TO THE NEXT PAGE FOR INSTRUCTIONS

TEACHERS' ATTITUDINAL SURVEY
TOWARD VOCATIONAL-TECHNICAL EDUCATION

INSTRUCTIONS

Please read each of the following statements concerning vocational education. Then circle the answer to the right of each statement which best represents your own feeling about the statement. Please do not consult with anyone else. These are your possible answers.

SA: Strongly Agree
A: Agree
?: Undecided
D: Disagree
SD: Strongly Disagree

You will find the above key at the top of each page.

(For research purposes, you must consider all statements as they are, without modifying them in any way.)

KEY: SA (Strongly Agree), A (Agree), ? (Undecided), D (Disagree), SD (Strongly Disagree)

---

1. Failure to offer vocational education cannot be justified in a democratic society. SA A ? D SD
2. Vocational education courses are as important for college-bound students as they are for noncollege-bound students. SA A ? D SD
3. Junior high school students can profit from specialized vocational courses commensurate with their maturity levels. SA A ? D SD
4. Vocational training is not as valuable to society as training for the professions. SA A ? D SD
5. Employer and employee organizations should not expect to be invited to cooperate with the school in planning its vocational-education program. SA A ? D SD
6. Vocational education is a powerful agency for promoting individual and social efficiency. SA A ? D SD
7. A course that helps students improve their personal attitudes and social living habits has no place in vocational-education curriculum. SA A ? D SD
8. Vocational education is one answer to youth unrest in this country. SA A ? D SD
9. Vocational education receives more support and funds than it deserves. SA A ? D SD
10. Increased vocational education may be an answer to the problems of unemployment. SA A ? D SD
11. Vocational-education programs do not help keep the potential dropout in school. SA A ? D SD

KEY: SA (Strongly Agree), A (Agree), ? (Undecided), D (Disagree), SD (Strongly Disagree)

---

12. The value of vocational education is sufficiently appreciated by the general public. SA A ? D SD

13. Vocational education should be handled outside the academic school system- - in technical institutes or community colleges. SA A ? D SD

14. It is a waste of time and human resources for high school students to take vocational-education courses. SA A ? D SD

15. Vocational-education courses are among the most valuable courses a high school student can take. SA A ? D SD

16. Vocational education should not emphasize the development of abilities that can be used for many years. SA A ? D SD

17. The major function of the high school should be the preparation of students for entrance into college. SA A ? D SD

18. It is not a responsibility of the school to provide placement services. Student-placement services are adequately provided by governmental agencies. SA A ? D SD

19. The need no longer exists for vocational courses in high school. SA A ? D SD

20. Vocational education has its faults, but on the whole it is a valuable part of the high school curriculum. SA A ? D SD

21. Manpower needs of the community should be considered in determining the type of vocational-education programs to offer. SA A ? D SD

22. Cooperative work-experience programs contribute little to the effectiveness of vocational-education programs. SA A ? D SD

KEY: SA (Strongly Agree), A (Agree), ? (Undecided), D (Disagree), SD (Strongly Disagree)

---

23. Schools have a responsibility to provide occupational education for persons of all levels of ability. SA A ? D SD

24. Manpower needs can be partially met through vocational education. SA A ? D SD

25. Many women need vocational-education experiences to vitalize their old skills and to learn new skills. SA A ? D SD

26. Educating persons for a vocation does not result in as great a return to society as educating persons for the professions. SA A ? D SD

27. Vocational education has proved itself to be an indispensable part of the curriculum in the high school. SA A ? D SD

28. While vocational education has some value to high school students, it is not an essential part of the high school curriculum. SA A ? D SD

29. Occupational information should be available to all students. SA A ? D SD

30. The knowledge students could obtain from vocational-education courses is of doubtful value. SA A ? D SD

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